employment, incomes and equality

a strategy for increasing productive employment in Kenya

REPORT OF AN INTER-AGENCY TEAM FINANCED BY THE UNITED NATIONS DEVELOPMENT PROGRAMME AND ORGANISED BY THE INTERNATIONAL LABOUR OFFICE
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# Employment, incomes and equality

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Administrative map of Kenya
Unemployment has now become chronic and intractable in nearly every developing country. Whereas the industrial countries have mostly reduced open unemployment to about 3 to 6 per cent of their labour force, the comparable figure for other parts of the world is frequently over 10 per cent, and on top of this there are a range of other serious employment problems. Moreover, part of the difficulty is structural, in the sense that many of these employment problems will not be cured simply by accelerating the rate of growth.

As the lessons of the 1960s accumulate, it is increasingly clear that these employment problems are closely related to inequalities in incomes and opportunities, which are not merely among their consequences but among their causes as well. It is in part the sharp and often growing contrasts between rural and urban living standards and opportunities, and within the urban income structure, which account for the rush of migration to the towns, the high aspirations among educated youth and the effort and sacrifice put into the search for a better-paid job. Thus social justice and a fair distribution of the benefits of growth are not only needed for their own sakes but have become conditions for eradicating unemployment.

The ILO World Employment Programme was launched by the Director-General at the 1969 session of the International Labour Conference. As part of the Programme, pilot country missions were envisaged, to study, with the help of other agencies in the United Nations system, the causes of unemployment in countries with particular types of problems, and to bring out what needed to be done internationally as well as nationally. The reports of these missions have in fact several purposes, being intended not only to give the government concerned an analysis of its unemployment problem and a suggested programme of action, but also to provide guidance for the aid and trade policies of international organisations and of donor agencies, and to indicate priorities in research.
After exploratory discussions between the national authorities and Professor Kjeld Philip, who was at the time a consultant to the World Employment Programme with special reference to Africa, the Government of Kenya formally invited a mission under the Programme in February 1971. The Director-General decided that this should be the first pilot project for Africa under the Programme. ¹ Finance was provided by the United Nations Development Programme. The participation of certain individual members of the mission was financed by the Swedish International Development Agency, the Netherlands Bureau for Technical Assistance, the Danish International Development Agency and some of the agencies represented. The Rockefeller Foundation also financed the participation of one of the mission members.

Besides the ILO, the following nine international agencies or organs helped in various ways, which included the provision of the services of staff members, advice on the selection of consultants (in some cases also assistance in financing their participation), research work and the supply of material already prepared, and help from their technical assistance experts in the field:

United Nations Food and Agriculture Organization (FAO)
United Nations Educational, Scientific and Cultural Organization (UNESCO)
World Health Organization (WHO)
International Bank for Reconstruction and Development (IBRD)
United Nations Industrial Development Organization (UNIDO)
United Nations Conference on Trade and Development (UNCTAD)
United Nations Development Programme (UNDP)
United Nations Children’s Fund (UNICEF)
United Nations Economic Commission for Africa (ECA).

The collection of materials was put in hand, and after a meeting of agency representatives, preparatory research was started at the headquarters of the ILO and of other agencies. It was soon obvious that a great deal of material on the employment situation in Kenya already existed, and a systematic bibliography of over 400 items was compiled. Many of these had been prepared by staff of the Institute for Development Studies of the University of Nairobi; indeed, the availability of relevant research material bearing directly on employment problems surpasses what is generally available in most developing countries. A number of additional background papers were specially prepared by members of the Institute. Preliminary work also proceeded at the Institute.

¹ Earlier mission reports published under this Programme relate to Colombia and Ceylon. See ILO: Towards full employment, A programme for Colombia prepared by an inter-agency team organised by the International Labour Office (Geneva, 1970); Matching employment opportunities and expectations: A programme of action for Ceylon, The report of an inter-agency team organised by the International Labour Office (Geneva, 1971).
of Development Studies at the University of Sussex, some of whose staff had been closely involved with the earlier ILO missions to Colombia and Ceylon.

Professor Hans Singer of the latter Institute, who had been a consultant to the World Employment Programme since 1969, was invited to lead the mission, and visited Nairobi in August and October 1971 to discuss the project with the Minister for Finance and Planning, the Minister for Labour and various government officials. Further arrangements were made in December by Professor Richard Jolly, joint chief of the mission, and Mr. Louis Emmerij, Deputy Chief of the Employment Planning and Promotion Department of the International Labour Office. From January to March, a preparatory group worked in Nairobi, assembling statistical and other material, under the leadership of the ILO Regional Adviser for Africa in Manpower Planning, Dr. Shyam Nigam. A visit by Mr. P. R. Iyer of UNESCO and by Mr. Lawi Odero-Ogwel of FAO was also helpful at this stage.

From this series of meetings, there emerged a clear need to draw much more fully on local expertise. Obvious though this need may seem, its recognition on the part of an international mission was something of an innovation. Professor Simeon Ominde of the University of Nairobi, Professor Dharam Ghai, Director of the Institute for Development Studies of the University of Nairobi, and Dr. Philip Mbithi, of the same Institute, were members of the mission, and various other members of the staff of the University or the Institute agreed to work with the mission as part-time members or consultants. Many of the international members had also had extensive previous experience in Kenya. The full involvement of local residents of the country in the work of the mission added greatly to the report and, judging from this experience, would be a valuable innovation for other international missions.

Those who took part in the work of the mission for the period of the field work are listed below (asterisks denote those who were members of the group which subsequently worked on the drafting of the report).

The following were full-time members:

*Hans Singer, Fellow of the Institute of Development Studies, University of Sussex.

*Richard Jolly, Fellow of the Institute of Development Studies, University of Sussex.

John Anderson, Lecturer in Sociology of Education, University of Sussex.

*Ajit Bhalla, staff member, Employment Planning and Promotion Department, ILO.

Eric Clayton, Reader in Agricultural Economics, Wye College, University of London.

William Cole, staff member, Policies and Programming Division, UNIDO.
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Charles Cooper, Senior Research Fellow, Science Policy Research Unit and Institute of Development Studies, University of Sussex.

*Louis Emmerij, Deputy Chief, Employment Planning and Promotion Department, ILO.

*Dharam Ghai, Director, Institute for Development Studies, University of Nairobi.

Ichirou Inukai, Institute for Development Research, Copenhagen.

Anthony Joppa, Regional Planning Officer, UNICEF, Kampala.


Murray Lunan, staff member, Rural Institutions Division, FAO.

*Philip Mbithi, Senior Lecturer, University of Nairobi.

Jens Muller, Institute for Development Research, Copenhagen.

Shyam Nigam, ILO Regional Adviser in Manpower Planning, Addis Ababa.

Lawi Odero-Ogwel, staff member, Economic Analysis Division, FAO.

Emmanuel Okwuosa, staff member, ECA-FAO Joint Agriculture Division, Addis Ababa.

Ulla Olin, staff member, UNDP, New York.

Simeon Ominde, Professor of Geography, University of Nairobi.

Louis Sangare, staff member, ECA, Addis Ababa.

*Lawrence Smith, Senior Lecturer, Department of Political Economy, University of Glasgow.

Cornelius Tuinenburg, ILO associate expert, Dar-es-Salaam.

*John Weeks, Lecturer in Economics, University of Sussex.

*Edgar Winans, Professor of Anthropology, University of Washington, Seattle.

Tijani Yesufu, Director, Human Resources Research Unit, School of Social Studies, University of Lagos.

In addition, the following worked with the mission for varying lengths of time:

Nassau Adams, Chief, Development Section, Research Division, UNCTAD.

Stig Asklund, ILO associate expert, Addis Ababa.

John Burrows, staff member, Eastern Africa Department, IBRD.

Efren Cordova, staff member, Social Institutions Development Department, ILO.

Ian Carruthers, Lecturer, Wye College, London.
Preface

Robin Ford, ILO expert, Nairobi.
George Gwyer, Research Fellow, Institute for Development Studies, University of Nairobi.
Lars Kalderen, Office for Development Co-operation, Royal Ministry of Foreign Affairs, Stockholm.
Peter Kinyanjui, Centre for Studies in Education and Development, Harvard University.
Stephen Lewis, Visiting Professor, Institute for Development Studies, University of Nairobi.
Keith Marsden, staff member, Research and Planning Department, ILO.
Gideon Mutiso, Lecturer, University of Nairobi.
Henry Polak, WHO Representative for Kenya and Seychelles, Nairobi.
John Power, Visiting Professor, Institute for Development Studies, University of Nairobi.
Rasmus Rasmussen, Office for Development Co-operation, Royal Ministry of Foreign Affairs, Stockholm.
Dorothy Remy, University of Sussex.
Robert Rowat, staff member, FAO.
*Dudley Seers, Director, Institute of Development Studies, University of Sussex.
Tony Somerset, Senior Research Fellow, Institute for Development Studies, University of Nairobi.
Frances Stewart, Senior Research Officer, Institute of Commonwealth Studies, Oxford.
Michael Stewart, Reader, University College, University of London.
Duccio Turin, Professor of Building, University College, London.

Mr. Leopold Mureithi acted as research assistant. Mr. Joseph Kinga and Mr. Paul Nyambuga assisted with statistical compilations for the mission.

The final revision of the draft report was prepared by a drafting group consisting of Mr. Bhalla, Mr. Emmerij and Mr. Smith, working with the two chiefs of the mission.

In addition to the above, persons who prepared background papers or memoranda for the mission included the following:

Mr. Andrew Errington, Department of Agricultural Economics, University of Nairobi.
Mr. Peter Hopcroft, Institute for Development Studies, University of Nairobi.
Mr. Eric Huggins, Urwick Orr Management Consultants, London.
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Mr. Sylvain Lourie, Director, Division of Planning and Administration, UNESCO.

Mrs. Margaret Meek, IFO Institute, Federal Republic of Germany.

Mr. Frank Mitchell, Adviser on tourism, Ministry of Finance and Planning.

Dr. R. S. Odingo, Department of Geography, University of Nairobi.

Miss Carolyn Parker, University of Washington.


Mr. René Wery, ILO, Geneva.

Mr. Benjamin G. Wisner, University of Nairobi.

Jacques Boisard, ILO staff member attached to the ILO Regional Office for Africa in Addis Ababa, was the mission’s administrative officer in Nairobi. At ILO headquarters, John Sykes, ILO staff member of the Employment Planning and Promotion Department, was responsible for administrative arrangements as well as for initial organisation in Nairobi.

The many staff members of the ILO and other international agencies at present working in Kenya who gave the mission valuable assistance during its stay in Kenya are too numerous to mention. But special acknowledgment should be made to the UNDP Resident Representative in Kenya, Mr. Bruce Stedman, for his advice and support, Miss Suzanne Drouilh, Deputy Resident Representative, and to Mr. Anders Persson, the Assistant Resident Representative. The contribution of Mr. Meshack Ndisi, ILO Regional Director for Africa, should also be mentioned.

A team of secretaries, who were ably led by Mrs. E. Browne, assisted by Mrs. Pereira, undertook the enormous task of typing the hundreds of working papers, as well as the draft report. This also involved long hours in the duplicating room, organised by Mr. Simon Njoroge. We are equally indebted to another team of secretaries who typed the revised and final drafts of this report in Geneva. This work took place under equal time pressure. The secretaries who managed to cope with this big task included Suzanne Barton, Sue Evans, Ita Cusack, Julia Grundy and Mercedes Richards.

The work of the mission was divided into four stages—preparatory work; the main period of field investigations; drafting and editorial work, to prepare the draft report; and revision of the draft report in the light of comments received and further discussions. At each stage of its work, members of the mission were given extensive briefings by officials of the ministries most directly involved in employment policy. At the outset the mission had the benefit of detailed briefings from both the Minister for Finance and Planning, the Hon. Mwai Kibaki, and the Minister for Labour, the Hon. E. N. Mwendwa. The initial government briefing was given by Mr. Philip Ndegwa, Permanent
Secretary, Ministry of Finance and Planning. To maintain contact, a standing liaison committee was created, including government representatives from the following ministries:

- Ministry of Finance and Planning
- Ministry of Agriculture
- Ministry of Commerce and Industry
- Ministry of Co-operatives and Social Services
- Ministry of Education
- Ministry of Labour
- Directorate of Personnel, Office of the President
- Ministry of Works.

We are particularly grateful to the following officials of the Ministry of Finance and Planning:

- Mr. Philip Ndegwa, Permanent Secretary
- Mr. Nicholas Nganga, Deputy Permanent Secretary, Finance
- Mr. Harris Mule, Deputy Permanent Secretary, Planning
- Mr. David Davies, Human Resources Adviser
- Mr. Jack Kisa, Senior Planning Officer
- Mr. Humphrey Kagunda, Planning Officer designated as government liaison officer with the mission.

We are also grateful to officials of the Ministry of Labour for much valuable general advice and the organisation of a survey on questions of labour turnover specifically for the purposes of the mission. We should like to thank particularly Mr. Otieno, Permanent Secretary, Mr. Mutugi, Labour Commissioner, and Mr. Omondi, Assistant Labour Commissioner, as well as other officers of the Ministry.

These contacts were followed up by a succession of further meetings of members of the mission, in groups or individually, with persons in Nairobi and in various other parts of the country. This included an important period of about ten days of field visits, during which the mission in three groups visited most of the main regions. We were not a mission empowered to take evidence but we are grateful to the numerous people from all walks of life—provincial commissioners and other government staff at all levels from province to location, individual farmers, housewives, traders and craftsmen, who willingly gave time to answer questions and discuss matters formally and informally with members of the mission.

The mission was grateful for much help given by Mr. Surjit Heyer, the Director of Statistics, and his staff, particularly Mr. Parmeet Singh and
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Mr. Julian Exeter. This involved a good deal of additional work, including special tabulations of earlier surveys and numerous discussions on technical points. Through their help, the mission was able to compile a large compendium of statistical material relating to employment, copies of which have been made available to government staff. In addition, the Ministry of Labour made available their field staff to undertake a survey of turnover and overtime.

Special meetings were held to obtain the view of members of the Central Organisation of Trade Unions and of the Federation of Kenya Employers, including the following:

Trade Unions:

J. D. Akumu, Secretary-General, Central Organisation of Trade Unions
J. G. Mollo, General Secretary, Railway African Union
Henry Koweru, General Secretary, Kenya Quarry and Mine Workers’ Union
Chadwick Adongo, General Secretary, Union of Posts and Telecommunications Employees
Charles Anyona, National Organisation Secretary, Transport and Allied Workers’ Union
James Awich, General Secretary, Kenya Shoe and Leather Workers’ Union
Jacob Zedekiah Ochino, General Secretary, Petroleum Union
Livingstone Weche, Director of Education, Central Organisation of Trade Unions
Michael M. Mbogo, area secretary, Central Organisation of Trade Unions
Joseph Willis Amuti, National Treasurer, Kenya Union of Sugar Plantation Workers.

Employers:

C. H. Malavu, President, Federation of Kenya Employers
J. K. Gecau, Vice-President, Federation of Kenya Employers
R. Bennett, President, Kenya Sisal Growers’ Association
J. B. Feingold, Executive Officer, Kenya National Farmers’ Union
L. Jones, General Manager, Unga Millers and Associated Industries
K. Harrup, Group Personnel Manager, Unga Millers
C. Gardner, Vice-Chairman, Kenya Tea Growers’ Association
V. E. Kirkland, President, Kenya Coffee Growers’ Association
An employment-oriented development strategy is bound to affect many interests beside those directly represented within the tripartite structure of government and of employers' and workers' organisations. The mission therefore made particular efforts to obtain the views of others directly concerned—the unemployed, low-income groups, the self-employed and so on. Contact was also made with the National Christian Council of Kenya, university staff and numerous individuals with first-hand knowledge of the situation in various parts of the country. We would specially mention also the help obtained from Mr. Saeed Cockar, President of the Industrial Court.

In 1970, the Government appointed a select committee of the National Assembly to investigate the problem of unemployment and to scrutinise thoroughly all possible measures for alleviating it. We were fortunate in having a number of meetings, individually and collectively, with the chairman, the Hon. G. N. Mwicigi, and with the following other members of the committee:

The Hon. A. H. Ahmed  
The Hon. K. N. Gickoya  
The Hon. B. M. Karungaru  
The Hon. S. Lugonzo  
The Hon. M. T. ole Marima  
The Hon. O. J. Mnene  
The Hon. K. B. Mwamzandi  
The Hon. E. W. Mwangale  
The Hon. Mrs. G. Onyango.

We were also given access to the minutes of evidence submitted to the committee.

The mission's draft report was also discussed at a meeting of agency representatives held at the International Labour Office on 5 and 6 July 1972. Just before that, the chiefs of the mission visited Nairobi to receive the Government's comments on the draft report. The final draft was prepared immediately after the inter-agency meeting.

Authorship and nature of the report

A premise of the country studies under the World Employment Programme is that responsibility for them rests not with the ILO or other sponsoring
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agencies but with the chiefs of the mission. The latter build on the papers prepared by those who have participated in the work, with the help of an editorial group, and draw on the accumulated experience of the agencies. It is a necessary consequence of the need to arrive at a coherent and internally consistent set of recommendations that the report cannot be simply the sum of the views of all those who took part. The corollary of this is that none of them is personally responsible for the analysis or the recommendations; that responsibility rests entirely with the two chiefs of the mission. Phrases in the report using the first person plural or speaking of the views of “the mission” should be interpreted in the light of this paragraph.

Because of the shortage of time and the complexity of many aspects of the problem, we have not been able to obtain all the data required or to study policy alternatives in any depth (or even to check all our statistics thoroughly). In many cases, we are aware of the need to test our conclusions, and sometimes we suggest the need for research and for issues to be further considered by other bodies. We have nevertheless tried to state frankly and clearly the many facets of unemployment, and indicated what in our view are possible lines of solution.

We have tried to keep the report as brief as possible, but even so it is long. Various items of supporting analysis or data are included as technical papers, printed at the back of the volume. There are cross references to the technical papers in the main report. Four additional mission papers were also prepared and submitted to the Government.
INTRODUCTION

It may be useful at the outset of this report to give an indication of the broad lines of our approach and the structure of our arguments. This is all the more necessary because in many ways our view of the employment problem in Kenya, and of its causes, differs sharply from earlier analysis.

There are in the first place three distinct types of problems underlying concern with the employment situation: the frustration of job seekers unable to obtain the type of work or the remuneration which they think is reasonable, or which their education has led them to expect; the low level—in fact the poverty level—of incomes obtained by many producers and their families as the return on their work, whether in self or family employment or in wage employment; and the underutilisation and low productivity of the labour force, both male and female, which reflects inefficiency in the way labour is trained, deployed or supported with other resources.

The report puts the greatest emphasis on the second of these problems, the poverty level of returns from work, because ultimately this is the most pervading and basic issue. However, it is also important to deal with the other two. For young persons, whether educated or not, to enter the labour force either with a frustrating round of job seeking or animated by resentment at missing opportunities which they feel they deserve is hardly a good way for them to acquire the experience and work attitudes required for a productive life, nor does it augur well for social stability. As regards the third problem, increased labour utilisation and productivity is an essential condition for a sustained increase in production leading to improved living standards, particularly among the poorest groups.

It is repeatedly emphasised in this report that the people of Kenya are affected by all three of these problems; but different groups are affected by different employment problems in different ways in different parts of the country: the problems differ between men and women, between school leavers,
other young people and older persons, and between people in the semi-arid regions and in the overpopulated districts and elsewhere. Given the time available, we have had to be less specific with regard to each of these groups than we would have desired, but we have no doubt that to arrive at satisfactory solutions, plans must be prepared for all these groups.

Our view of the causes is similar: there is not one cause of the employment problem but many. Most of these causes are, in one way or another, aspects of imbalances—the imbalance between the growth of the labour force, the urban population and education and the over-all growth of the economy, and the imbalance between people's aspirations and expectations of work and the structure of incomes and opportunities available.

Both types of imbalance are related to basic trends and features of Kenya's economy. Here our starting point is the poverty of the country at large, and its productive structure, inevitably still influenced by the colonial era. The Kenyan economy is not one which is isolated: it is part of the world economy. Although the colonial links have been broken, the influence of the outside world has in many ways grown stronger since independence. Influences exerted through education, the information media and advertising have stimulated a desire for "modernisation", particularly among younger persons but to some extent among the whole population, even in the more remote parts of the country. Such influences are by no means all bad, nor are they all exerted from outside the country. Nevertheless, rising expectations fed in part from the outside world have not been matched by equivalent support to help attain them. Though Kenya has been a focus of international aid and private foreign investment, such support has been limited and its benefits have often been undercut and in some respects outweighed by the unhelpful influences accompanying them—biases in technology, restrictions in export markets and worsening terms of trade, strings to aid, and transfer payments abroad.

These outside causes are paralleled by, and in some cases have caused, imbalances within the country. The tendency of Nairobi and the other urban areas to grow at the expense of the rural, of the richer regions in relation to the poorer, has led to growing imbalances between regions and different groups of the population. Education has contributed to this imbalance and made clear its consequences in intensely personal terms. Those who succeed within the school system obtain the certificates and the good jobs—or did at first. But as education expanded fast, among a population itself fast expanding, thousands of young Kenyans, with their parents and other supporters, are beginning to find their certificates almost worthless, at least for obtaining jobs. First it was the primary-school leavers, then the form 2 leavers, now those with school certificates, soon those with university arts degrees. This is the background to frustration among school leavers and their families.
What is the solution? Here the report puts the emphasis differently from earlier analyses. If the problem is primarily lack of jobs, the solution must be the provision of more jobs. But if the problem is primarily an imbalance in opportunities, the solution must be to put right the imbalances: simply to provide more jobs within the existing framework of imbalance may make the problems worse. More urban jobs for secondary-school leavers at existing salaries are likely to give rise to a more than proportionate increase in the demand for them, and thus in secondary-school enrolment and internal migration. Hence our emphasis on putting right the imbalances, on equity in place of gross inequality, in earnings, education, and land holdings, among regions, districts and individuals, and in other respects.

For a basically poor although rapidly growing country, however, equity is not a substitute for growth. With greater equality, resentment and job-seeking might be reduced but low incomes and poverty would remain. Hence our emphasis on continued growth and expanded production in every sector. Combined with equity, this leads us to a strategy of redistribution from growth.¹

Focusing on poverty has one fundamental implication for the coverage of the report: one is drawn to consider all poverty groups, not just the unemployed or even those working short time.² Those with insufficient land, or the working poor in the towns, are often occupied for very long hours. But if their returns from this work provide no more than a poverty standard of living, they are just as much part of the problem as the unemployed.

For most of the rural population (nine-tenths of Kenya’s total), the crucial question is not the availability of jobs, in the sense of paid work for others, but the availability of land, together with the knowledge and supporting services to farm it well and obtain a reasonable income. For those with land, there is usually no lack of things to do, and thus, in general, no involuntary “unemployment” (though there can be unemployment during droughts, for example: hence our concern with famine and public works).

But there are problems of employment, most notably a lack of opportunities for employment. Those with small plots, with land of inferior quality or in areas of little or unreliable rainfall are usually engaged in a continual struggle to keep above the margin of poverty, and even to get enough to eat. A related

¹ See Chapter 7.
² We have, however, not thought it necessary to indulge in a whole catalogue of different definitions of employment and unemployment. Better, we felt, to use the term “unemployment” to refer to persons not engaged in economic activity but wanting to, and when talking of other things, to refer specifically to what we mean. Thus “job seekers” in the report refers to persons seeking jobs: it implies nothing about whether or not such persons already have a job or some type of work. “Under-employment” is a term which we decided to avoid. Instead, we refer to persons working short hours or at low incomes or producing very little, as the case may be.
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though often separate problem, even for those with somewhat more land, is the need for cash: cash for taxes, for school fees, for a mass of minor purchases and—for the better farmers at least—for the hybrid seed, fertiliser and other things needed to raise their levels of output. A lack of crops for sale leads many families to seek a direct source of cash, perhaps from a relative working for wages. Others, particularly the young and educated, migrate to the towns and seek jobs there, joining other urban wage earners most of whom still maintain close links with their rural base.

The division of labour between men and women in the rural areas creates further employment problems. The role of women is often governed by traditions set long ago, in different economic circumstances. With the change in economic activities—from cattle to crops, or from existing crops to others with different patterns of labour requirements—and with the children at school and often the husband in town, the traditional allocation of work no longer fits the modern demands and supply of labour. The common though not universal result is that women work extremely long hours, much longer than the men in the same families. Quite apart from personal weariness this often appears to leave many women with insufficient time to complete all their duties satisfactorily, particularly at peak seasons of labour demand.

This picture contrasts sharply with statistical approaches to the situation, such as those assuming that the female labour force participation rate—the proportion of women engaged in economic activities—is 45 per cent. In this report, therefore, we have adopted a quite different approach. All the evidence available suggests that almost all Kenyan women in the rural areas are engaged fairly regularly in economic activities. Moreover, even when not busy with economic activities, they are usually active in household duties. To lay great emphasis on the distinction between economic and non-economic activities seems somewhat arbitrary in the case of rural areas, particularly when both of those kinds of activities contribute to raising family living standards. Our approach has therefore been to forget about labour force participation rates and to do our best to account for how the different sections of the adult population spend their time.

In the urban areas, we have followed the same procedure, not because we feel that the use of some participation rate is in this case inappropriate but because the statistical basis for the choice of a particular participation rate for women is so arbitrary. Here problems arise both in the measurement of the labour force and in the measurement of employment. The problem with the labour force is to define who is in it—a difficult matter given the limited opportunities for employment, particularly for women, and the difficulties

1 See, for example, Kenya Statistical Digest, June 1971.
of predicting how participation might change with a change in the social context. The problem with employment is that the statistics are incomplete, covering a major part of wage-earning employment and some self-employment in the larger and more organised firms but omitting a range of wage earners and self-employed persons, male as well as female, in what we term "the informal sector".

The popular view of informal-sector activities is that they are primarily those of petty traders, street hawkers, shoeshine boys and other groups "under-employed" on the streets of the big towns. The evidence presented in Chapter 13 of the report suggests that the bulk of employment in the informal sector, far from being only marginally productive, is economically efficient and profit-making, though small in scale and limited by simple technologies, little capital and lack of links with the other ("formal") sector. Within the latter part of the informal sector are employed a variety of carpenters, masons, tailors and other tradesmen, as well as cooks and taxi-drivers, offering virtually the full range of basic skills needed to provide goods and services for a large though often poor section of the population.

Often people fail to realise the extent of economically efficient production in the informal sector because of the low incomes received by most workers in the sector. A common interpretation of the cause of these low incomes (in comparison to average wage levels in the formal sector) has been to presume that the problem lies within the informal sector; that it is stagnant, non-dynamic, and a net for the unemployed and for the thinly veiled idleness into which those who cannot find formal wage jobs must fall. It is hardly surprising that this view should be widespread, for academic analysts have often encouraged and fostered such an interpretation. Further, from the vantage point of central Nairobi, with its gleaming skyscrapers, the dwellings and commercial structures of the informal sector look indeed like hovels. For observers surrounded by imported steel, glass and concrete, it requires a leap of the imagination and considerable openness of mind to perceive the informal sector as a sector of thriving economic activity and a source of Kenya's future wealth. But throughout the report we shall argue that such an imaginative leap and openness of mind is not only necessary to solve Kenya's employment problem, but is entirely called for by the evidence about the informal sector. There exists, for instance, considerable evidence of technical change in the urban informal sector\(^1\), as well as of regular employment at incomes above the average level attainable in smallholder agriculture. The informal sector, particularly in Nairobi but to varying degrees in all areas, has been operating under extremely debilitating restrictions as a consequence of a pejorative view of

\(^1\) Some examples are given in Technical Papers 21 and 22.
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its nature. Thus there exists an imminent danger that this view could become a self-fulfilling prophecy.

Later we explain how employment in the informal sector has grown in spite of obstacles and lack of outside support: the evidence suggests that employment has probably increased a good deal faster in the informal than in the formal sector. It is therefore impossible to judge how the employment problem has changed merely from the data on employment in the formal sector.

Our analysis lays great stress on the pervasive importance of the link between formal and informal activities.¹ We should therefore emphasise that informal activities are not confined to employment on the periphery of the main towns, to particular occupations or even to economic activities. Rather, informal activities are the way of doing things, characterised by—

(a) ease of entry;
(b) reliance on indigenous resources;
(c) family ownership of enterprises;
(d) small scale of operation;
(e) labour-intensive and adapted technology;
(f) skills acquired outside the formal school system; and
(g) unregulated and competitive markets.

Informal-sector activities are largely ignored, rarely supported, often regulated and sometimes actively discouraged by the Government.

The characteristics of formal-sector activities are the obverse of these, namely—

(a) difficult entry;
(b) frequent reliance on overseas resources;
(c) corporate ownership;
(d) large scale of operation;
(e) capital-intensive and often imported technology;
(f) formally acquired skills, often expatriate; and
(g) protected markets (through tariffs, quotas and trade licenses).

Our strategy of a redistribution from growth aims at establishing links that are at present lacking between the formal and the informal sectors. A

¹ We should record here that the thinking of the mission on these matters has been greatly influenced and helped by a number of sociologists, economists and other social scientists in the Institute for Development Studies at the University of Nairobi. One begins to sense that a new school of analysis may be emerging, drawing on work in East and West Africa and using the formal-informal distinction to gain insights into a wide variety of situations. For more elaborate treatment of the relation between the formal and informal sectors, see Technical Paper 22.
transfer of incomes from the top income groups to the working poor would result in new types of labour-intensive investments in both urban and rural areas. This should not only generate demand for the products of the informal sector but also encourage innovations in labour-intensive techniques in this sector. The various policies which we recommend in other parts of the report are intended to reduce risk and uncertainty on the part of those employed in the informal sector and to ensure a dynamic growth of this large segment of the Kenyan economy.

Unemployment is often analysed as simply the result of the first type of basic imbalance, between a rapidly growing labour force and a more slowly growing number of job opportunities. If population, it is said, grows at 3.3 per cent as in Kenya, and enumerated wage-earning employment grows—as in Kenya since 1964—at 1.9 per cent, increasing unemployment results.¹ And as long as the divergent growth rates continue, the prospect of growing unemployment in the future seems inevitable. Economic growth even at Kenya's recent rates of 6 to 7 per cent is no protection, it is argued, since inappropriate technologies and rising wages increase productivity so rapidly that growth is robbed of its power to increase the number of jobs faster than the labour force. Although this explanation has sometimes been used in Kenya, it should by now be clear why we have found it seriously deficient, and in some respects seriously misleading, as the main explanation of the Kenyan situation. It ignores the fact that the bulk of the population works on the land, not in wage-earning jobs. It depends crucially on the statistics of the growth of enumerated employment in the formal sector, whereas—as we stated earlier—enumerated employment ignores a large and apparently growing amount of employment in the “informal sector”. Thirdly it focuses too exclusively on jobs, instead of on opportunities for earning a reasonable income.

But apart from these weaknesses, the explanation just discussed analyses the situation exclusively in terms of over-all imbalances, giving no weight to imbalance between the structure of skills and aspirations of the labour force and the structure of incentives and incomes from work. It pays no attention to the variations in the incidence of employment problems seasonally, regionally, by age or by sex.

There are also marked contrasts between the relative security and income levels of those with wage-earning jobs in the bigger firms and those self-employed in the informal sector. These sharp inequalities inevitably create strong ambitions to migrate to the towns, to strive for higher education, to search for a job. As long as extreme imbalances persist, so will unemployment,

¹ The imbalance is even greater if one compares growth rates of the urban population or of the number of school leavers with the growth of enumerated employment.
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since large differentials will always attract a margin of job seekers to hover in the towns, near the chances of the good jobs, in the hopes of snapping one up. This explains why the analysis of inequality is fundamental to the explanation of employment problems in Kenya.

But unemployment is not only the result of imbalance in differentials and opportunities. Even with perfect equality, unemployment could arise. Fast rates of population growth, of urbanisation and school expansion inevitably make it more difficult to absorb the growing labour force and reduce the time that might otherwise be available for structural adjustments. Here a second set of imbalances arise—dynamic imbalances relating to the structure of economic growth in the economy and to the constraints upon it. Rapid growth is needed, but rapid growth can itself generate imbalances which will frustrate its continuation—most notably a shortage of foreign exchange, of domestic savings, of skills and entrepreneurship, of demand or of the political support needed to keep the system workable. For this reason our report is not merely concerned with alleviating unemployment, poverty and gross inequality, but with economic growth on a pattern which can be sustained in the future, and which generates wider and more productive employment opportunities in the process.

Government policies have been evolving and changing in emphasis over time. They contain elements which are in accordance with the strategy proposed in our report, and other elements which are not. It has not been found necessary to include in the report itself a specific analysis of government policies as they have evolved, but a special paper on this subject has been prepared and submitted to the Government.

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1 Government's perception (past and present) of the nature and causes of employment problems and measures to deal with them.
SUMMARY AND RECOMMENDATIONS

In the case of a long report such as this, the busy reader and others may welcome a summary highlighting what we feel to be the main features of our analysis and the key recommendations flowing from our strategy.

This summary brings together only the main strands, leaving the reader to consult the body of our report for details, including the detailed recommendations. Thus a reading of the summary cannot be a substitute for reading the report itself. In fact, the longer chapters of the report include summaries of their main arguments and recommendations. The present summary follows the sequence of the report.

SCOPE AND NATURE OF THE PROBLEM

Previous analyses have identified unemployment problems in Kenya. Our report is based on a broader analysis. We identify the main problem as one of employment rather than unemployment. By this we mean that in addition to people who are not earning incomes at all, there is another—and in Kenya more numerous—group of people whom we call “the working poor”. These people are working, and possibly working very hard and strenuously, but their employment is not productive in the sense of earning them an income which is up to a modest minimum. Thus an analysis of the problem of low incomes, income distribution and the concept of a minimum income are inherent in our approach to the problem. Insufficient incomes, in turn, are closely related to inequalities of access to education and other facilities—for example, between regions, different social groups and sexes—and, through these, are also closely related to urban migration and the frustration of unsuccessful job seekers. This frustration is particularly marked in Kenya among school leavers and their families.
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In the rural areas, the most important employment problem is defined as stemming from the lack of access to land. It is, of course, intensified by the rapid increase in population and the fact that less than 12 per cent of the land area in Kenya is suitable for crop production in the present state of technology. The majority of the families living on small holdings earn no more than £60 a year. Some of the poor smallholders benefit from remittances from relatives in towns. Some of them are squatters on land not belonging to them. The scope for supplementary or regular wage earning for the rural poor in the countryside, mainly in agriculture, differs from region to region, and is often limited by the seasonal nature of demand. Owing to this seasonality, the chance of earning wages is generally at a peak precisely when smallholders are also most needed for work on their own holdings (Chapter 1).

For those who cannot make a living in the rural areas or fulfil their aspirations there, there is the alternative of migrating to the towns. Particularly among the younger and the better-educated men (these two categories tend to coincide) there is a great influx to the towns, where both the formal and the informal sector of the economy offer income-earning opportunities. This influx has resulted in very rapid growth of the urban population, particularly of its African component. Moreover, the influx and the resulting demographic growth are increasingly concentrated in the single city of Nairobi. One important consequence of the migration is the division of individual households between urban and rural areas. A relatively high proportion (probably about 20 per cent) of urban wages is remitted to the countryside, while many small holdings are left in the charge of women who have to fend for themselves as agricultural producers as well as do household work and bring up children; they are often over-worked (over-employed in terms of work intensity or working hours), and yet are often among the working poor, especially if the husband fails to obtain work in town or fails to make remittances (Chapter 2).

The urban unemployment problem, in our estimates, is indicated by a rate of unemployment of 8–14 per cent (or a weighted average of 11.5 per cent). To this must be added the urban working poor who, if defined as persons earning less than 200 sh. a month, would be more numerous than those openly unemployed. Taken together, those who lack productive employment in the urban areas exceed 20 per cent of the males in Nairobi, with a much higher incidence among women. The problem is thus both different and perhaps more serious than is often realised (Chapter 3).

The school leaver problem in Kenya is more complex than is often assumed. It is an over-simplification to consider it essentially as an excess of new school leavers over new job openings for which their educational qualifications are

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1 See Introduction, pp. 5-6.
Summary and recommendations

required. In this respect there is some evidence that school leavers have shown themselves ready to adjust to new circumstances, and will accept almost any kind of work after some time even if their job does not correspond to their initial assessment of their prospects. However, the frustration that arises is due to the gross imbalance between their own prospects of income from work and those of others who are more educated, or have been educated before them. The root of the problem lies in the interaction of the conventional educational system and the wage and salary structure through the allocation of jobs and wages by reference primarily to educational qualifications. This has led to a great desire for education at ever higher levels, such education being associated in the minds of the public with income aspirations and expectations which the economy is becoming increasingly unable to fulfil (Chapter 4).

There are other imbalances and other problem groups which must not be overlooked by concentrating on school leavers. These other problem groups include the landless, the women who are heads of rural households and the pastoralists in the drier areas. Specific action to improve the conditions of these problem groups must be part of any employment strategy. Moreover, there are strong and continuing inequities within rural areas, within urban areas, and between regions of the country. Disparities of income and wealth are all-pervasive, persons at the lower end of the spectrum being generally among the working poor. Low incomes are also associated with limited opportunities and amenities. All these pose special problems for employment strategy. Finally, as a problem of special urgency in Kenya, there is the disparity between Nairobi (and perhaps a few adjoining areas) at the centre, and the rest of the country as a peripheral zone where jobs, services and economic opportunities are markedly inferior (Chapter 5, as well as Chapters 18 and 19).

A search for the causes of persistent inequities and unemployment in spite of a rapid rate of economic growth since the attainment of national independence must start with the colonial situation. On becoming independent, Kenya inherited a very lop-sided economy, already organised for the effective maintenance of very different ways of life for a tiny minority on the one hand, and a very large majority on the other. With few exceptions, Europeans occupied the top of the income scale, the Asians the middle and Africans the bottom. Inequality was thus deeply embedded within the economy.

Since independence, economic growth has largely continued on the lines set by the earlier colonial structure. Kenyanisation has radically changed the racial composition of the group of people in the centre of power and many of its policies, but has had only a limited effect on the mechanisms which maintain its dominance—the pattern of government income and expenditure, the freedom of foreign firms to locate their offices and plants in Nairobi, and the narrow stratum of expenditure by a high-income elite superimposed on a base of limited mass consumption.
Indeed, the power of the centre over the periphery may well be greater today than it was before, since there is now a closer correlation of interests between the urban elite, the owners of large farms and the larger foreign-owned companies.

At the same time, the range and strength of the influence of rich countries on developing countries has been growing rapidly. The influence of the technology of rich countries on production, consumer behaviour, bargaining power and income distribution is all-pervading. So also is the impact of the developed countries on local culture, attitudes and expectations, through the mass media, textbooks, exchanges of teaching staff and students, tourism and technical assistance. Finally, there are the more obvious political influences. All these forces have not necessarily hindered the growth of productive employment and greater income equality, but jointly they exert an extremely powerful and complex influence and set limits on the ability of Kenya to tackle these problems. To remedy this, a major revision of priorities is required in the 1970s (Chapter 6).

AN EMPLOYMENT-ORIENTED STRATEGY

Objectives and over-all strategy

The strategy is based on four objectives, which are in line with the philosophy underlying Sessional Paper No. 10 submitted to the National Assembly in 1965.1 These are—

(a) continued expansion of the economy;
(b) wider sharing of the benefits of expansion;
(c) national integration of the economy; and
(d) attack on extreme imbalances and disparities.

The demonstrated growth capacity of the Kenyan economy is a vital asset for the employment strategy. Over-all income levels are still so low that resources from growth are indispensable. Over-all growth of the economy of the order of 7 per cent (6 per cent growth of agricultural output and 8–9 per cent growth in the non-agricultural sectors) would be in line with and make possible the rapid implementation of the strategy proposed. A trade-off between growth and more equal distribution cannot be ruled out, especially as a temporary result of the proposed re-structuring of the economy; but many of the proposals should have the opposite effect of increasing output and growth.

Wider sharing of the benefits from growth is elaborated in a model scheme of redistribution from growth (Technical Paper 6). Minimum household

income targets are proposed which for 1978 might be, for example, 120 sh. a month for rural households and 200 sh. for urban households, with higher targets of 180 and 250 sh. respectively for 1985 (all at 1971 prices). These income standards need to be supplemented by more specific targets expressed in terms of real nutritional standards and of access to clean water, health services and basic education, and to be suitably varied to take account of the different sizes and composition of households. The resources for attaining these standards through the policies proposed in the report are to be found by temporarily stabilising the real incomes of the receivers of the top 10 per cent of total incomes. The investment of those resources in the programmes required to attain the minimum income targets, especially in labour-intensive employment-oriented projects benefiting the unemployed and the working poor, could double their incomes per head in a remarkably short time (Chapter 7).

The objective of national integration of the economy is reflected in measures directed to the reduction of regional and ethnic inequalities, and to the provision of more equal access to land, extension services, credit, water, jobs, etc., especially in agriculture, and also in the proposed quotas for education, government expenditures and other matters. Another approach is through Kenyanisation, and the proposed strategy is aimed at an effective Kenyanisation not only of individual jobs but of the economy as a whole. Three principles for Kenyanisation are set out:

(a) no premature displacement of persons with essential high-level skills;
(b) maximum utilisation of the skills, experience and capital of non-citizens; and
(c) taxation of non-citizens to supplement the system of work permits.

New relationships with the world economy are also proposed in many parts of the report, as well as greater selectivity in the use of external resources. Regional and international co-operation will both be required to make the strategy successful.

Of the fundamental imbalances that need to be corrected the following three are emphasised:

(1) The imbalance between the rate of population growth and the nature of the technology applied. This must be tackled from both ends, by reducing population growth (Chapter 8) and by adapting technology and product mix (Chapter 9).

(2) The imbalance between the centre and the periphery, i.e. essentially the imbalance between Nairobi and the rest of the country, between the urban and rural areas in general and among provinces and districts. Numerous measures suggested throughout the report are directed towards this, especially
proposals concerning rural development (Chapter 19) and the proposed quotas on government expenditure in Nairobi and in other urban and rural areas.

(3) The imbalance between the formal and informal sectors. Basic changes in government policy regarding the informal sector are an essential part of the proposed strategy (this is dealt with especially in Chapter 13).

Population policy

A reduction in the high rate of growth of population is an important part of an employment strategy, on account both of its long-term effect on the growth of the labour force and of its more immediate effect in reducing the dependency burden in addition to setting free sums for investments raising the rate of growth and income levels (for the unemployed and the working poor). Projections of population growth to the year 2000 indicate the magnitude of the challenge.

The Government’s policy of relying on education, voluntary acceptance and a link with positive health and health services has our full support. Yet there is also scope for the types of family planning that do not put further strain on already undermanned health services. The reduction in the birth rate in more developed countries has been largely achieved by such methods of family planning as the use of the condom and the development of preventive health care.

The family planning programme should be able to evoke increasing voluntary acceptance of family planning; indications of such support already exist. The educational programme should be pressed home with all force, and its progress could be monitored by reference to quantitative targets.

Foreign aid is now readily available, and full advantage should be taken of it. However, foreign staff should become less involved in the actual delivery of family planning services. Aid should be concentrated on providing training and fellowships for Kenyan staff and the equipment and supplies needed to implement the programme (Chapter 8).

The development of old-age security and the reduction of child mortality are essential pillars of any family planning programme, and both can be made objectives of specific policies. Some of our main recommendations are—

(a) a massive information and education programme, with quantitative targets, both to build up the future demand for services when the latter can be provided, and in the meantime to develop approaches to family planning which can be followed without making use of public services;

(b) special emphasis on securing local acceptance and realisation of the value of smaller families for local improvement through the Harambee (self-help) movement;
Summary and recommendations

(c) external aid for training, research, equipment, supplies and general financial support of family planning, rather than direct delivery of family planning services;

(d) improvement and extension of the operations of the National Social Security Fund as an alternative to the large family in providing for security in old age; and

(e) avoidance of the use of personal incentives, positive or negative, in the form of individual rewards or penalties in connection with the use of family planning services.

Technology

Technology is closely inter-linked with redistribution of incomes, both as a cause and as an effect. A predominantly capital-intensive technology is incompatible with a wider spread of employment opportunities when incomes are generally low and population growth rapid. Hence the determination of what is produced and how is of crucial importance for an employment strategy.

There are four main approaches to these questions. First, we consider general principles concerning the choice of a product mix and its adaptation to Kenyan income levels and living standards. A product mix can be changed through the redistribution of income, through direct influences on product choice or through international trade.

Secondly, there is scope for varying the factor proportions in favour of greater labour intensity in various sectors of the economy. To a large extent, removal of factor price distortions and the introduction of the concept of shadow pricing for project evaluation, especially in the public sector, should result in greater labour absorption.

Thirdly, there is a major need for changing the direction and speed of technical change in favour of Kenya's factor endowment. Kenya needs to develop a light capital goods industry to produce simpler agricultural and industrial inputs, in order to broaden the scope for innovation and adaptation of imported technology.

Fourthly, research and development in Kenya needs to be increased, in partnership with the present or an enlarged East African Community. This is a prerequisite for the development of a local capital goods industry (Chapter 9).

The main recommendations which follow from our analysis are:

(a) new criteria should be used for project evaluation and product selection, with the object of changing the product mix in favour of local goods consumed by the lower-income groups;
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(b) factor price distortions now working against labour intensity should be eliminated, for example by abolishing investment allowances and by levying differential import tariffs on capital goods, which are at present imported duty-free;

(c) social cost-benefit analysis should be introduced into project evaluation, especially in the public sector, for instance in public works and road construction;

(d) the manufacture of small tractors and other farm implements and spare parts should be developed (in co-operation with the East African Community) as the embryo of an indigenous capital goods sector; the farm mechanisation research centre at Nakuru should be enlarged to undertake research on the designing of prototypes of new machinery;

(e) resources devoted to research and development, especially of the East African Industrial Research Organisation, should be increased to enable added emphasis to be given to a technology programme for rural and small-scale industries;

(f) the East African Railway workshops should be used as a training ground for technicians, supervisors and managers.

Agriculture

Three major thrusts are proposed for an employment and incomes strategy for the agricultural sector, namely—

(a) the intensification of land use for both crop and livestock production, with a concentration of effort directed to the poorer families in an attempt to raise their standard of living by comparison with that of the community as a whole;

(b) a redistribution of land towards more labour-intensive farm units; and

(c) the settlement of unused or underutilised land.

The programme of intensification of land use requires increased research (see Chapter 9), improvements in the extension service, easier access to agricultural inputs, and a continuous review of agricultural pricing and marketing policies (Chapter 10).

The strategy requires farms and entire districts to be moved along the continuum from subsistence production to full commercialisation. We recommend that most attention should be paid to the subsistence end of this continuum, with highest priority being given to the rapid introduction of hybrid and synthetic maize in both the high-potential and the medium-potential areas.
Opportunities for cash crop or livestock production should be widespread. For an employment and incomes strategy, crops which have a high labour requirement per hectare, with a seasonal labour requirement which does not clash with that of other crops and yet promises a continuing and high financial return to the farmer, are to be preferred. We propose a cash crops programme for the high-potential areas based on pyrethrum, tea, horticultural crops and to a lesser extent coffee. We also propose the upgrading of native cattle through the extension of the artificial insemination service, the intensification of grassland use, and the development of intensive rearing of pigs and poultry and the stall feeding of cattle. For the medium-potential areas, more research is needed to identify desirable cash crops in addition to cotton. We recommend the rapid development of the beef industry as a source of income for the semi-arid areas.

Secondly, the strategy for land redistribution towards more labour-intensive units is based on the premise that much land on larger farms is being underutilised, and that output, incomes and employment would all be raised by the subdivision of farms in cases in which output per hectare is lower than might be expected from small holdings in a similar locality.

Specific recommendations for achieving this redistribution are as follows:

(a) if the joint owners of a farm prefer to run it as a number of individual plots they should be actively encouraged to do so;

(b) the Government should act as a willing buyer for any large farm offered for sale in the high-potential areas for subdivision into settlement plots;

(c) the Government should repossess any farm seriously in arrears with repayments to the Agricultural Finance Corporation or the Agricultural Development Corporation;

(d) the larger holdings on existing settlement schemes should be subdivided;

(e) in the longer term, a progressive land tax related to the size and productive potential of the holding should be introduced (Technical Paper 15); and

(f) in the longer term, a ceiling on individual land holdings should be considered.

We also recommend that in all future land transactions the Government should offer land on a leasehold or rental basis for a relatively short period of time, e.g. a maximum of 10 to 15 years.

Thirdly, to settle underutilised land it is necessary to overcome the imperfections of the land market and the constraints on the free movement of people between different parts of Kenya. We recommend that the Government should institute a programme of settlement on underutilised state land, by one or more of the following methods:
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(a) a laissez-faire approach of letting people infiltrate the underutilised areas;
(b) a phased programme setting limits on the rate at which immigrants could enter and be settled in underutilised areas, with local inhabitants being given priority;
(c) government purchase or long lease of trust land with a view to the settlement of landless people from the heavily populated areas; and
(d) the adjudication of trust land and the institution of individual ownership to encourage the development of commercial agriculture, in the hope that (with the assistance of a land tax) some form of subdivision or landlord-tenant system would develop.

Finally, we recommend the initiation of two medium-scale irrigation schemes in the next development plan period, so that planning and implementation capacity for major irrigation schemes in the late 1980s and 1990s may be developed. The subdivision of existing four-acre irrigation plots into two-acre plots should be instituted where practicable (Technical Paper 12).

Industry and construction

We deal separately with large-scale industry, rural and small-scale industry, and construction and housing. The prevailing import-substituting approach has serious weaknesses from the point of view of an employment strategy, because it intensifies tendencies towards unequal income distribution, capital-intensive technology, underutilisation of capacity, lack of export incentives, etc. While import substitution still has a useful role to play, a new industrial strategy is suggested, based on a revised protection system and on the development of industries processing agricultural products for export.

Special attention is given to the foreign-owned industrial sector and its effect on industrial technology. Here again, special problems arise from the point of view of employment, and a series of changes in taxation, licensing and negotiations with foreign investors are proposed.

The potential of small-scale and rural industries for employment promotion and income equalisation is great. The present constraints and ways of activating this potential are discussed: the Rural Industrial Development Programme, the industrial estates programme and the role of the Industrial and Commercial Development Corporation in co-ordinating and financing these programmes are discussed, and changes are recommended. More detailed action programmes are presented.

In housing and construction more flexible standards, contract procedures, training and research arrangements could promote the access of low-income
groups to good low-cost housing, and could increase employment and the use of local materials. The value of the site-and-service approach is discussed (Chapter 11).

The chief recommendations for the large-scale sector include the following:

(a) revision of the protection system;
(b) more export incentives;
(c) more international subcontracting;
(d) a series of changes in the basis for taxing foreign enterprise;
(e) greater initiative on the Kenyan side in dealing with foreign investors; and
(f) firmer control of access by foreign investors to local resources.

For small-scale and rural industries, the chief recommendations are to—

(a) re-organise and clarify the relationship between the Industrial and Commercial Development Corporation, the Kenya Industrial Estates Ltd. and the rural industrial development centres;
(b) strengthen horizontal co-ordination of industrial planning at local and district level;
(c) develop subcontracting;
(d) change government contracting and tender methods; and
(e) establish an industrial extension service in the Ministry of Commerce and Industry.

In housing and construction the major recommendations are—

(a) use of locally made materials, training in supervisory and managerial skills needed by the small African contractors and development of new contractual methods in the public sector;
(b) revision of construction standards in line with local needs and conditions;
(c) promotion of low-cost housing and site-and-service schemes; and
(d) revision of the orientation and content of technical and professional education in line with the new policies adopted.

Services

The activities traditionally covered by the term "services" are commerce, transport, miscellaneous private services, and government services such as public health. We follow a less traditional approach and include repair and maintenance, which we regard as an important labour-intensive sector of services (Chapter 12).
For an employment and incomes strategy for the services sector, we consider the following key elements:

(a) the promotion of small-scale enterprises, especially on the basis of self-employment, which is particularly suited to this sector besides agriculture;

(b) more emphasis on specific vocational preparation for service occupations;

(c) greater stress on the expansion of social services, e.g. health services in the rural areas; and

(d) discouragement of unnecessary mechanisation of trade, banking and personal services.

The Government's policy of Kenyanisation of trade and transport, intended to promote productive employment of Kenyan citizens, is examined in detail. The mission finds that the instruments used to implement Kenyanisation, especially trade and transport licensing and state trading through the Kenyan National Trading Corporation, do not always work in the interests of the small man. In particular, restrictive licensing protects the monopoly profits of the licence holders and prevents a wider sharing of the fruits of growth.

Our main recommendations for the trade and commerce subsectors are that—

(a) trade licensing should be liberalised (see also recommendations on the informal sector);

(b) the Kenyan National Trading Corporation should provide credit facilities on the basis of a careful selection of wholesale distributors;

(c) the Corporation should be more active in marketing, transport and storage; and

(d) the district loan scheme for small traders should be linked with technical assistance and aid in the construction of premises and other physical facilities.

There is greater scope for employment in road transport provided that the present licensing restrictions are lifted.

Government policy towards tourism should be based on a comparison of benefits in terms of foreign exchange with the various social costs involved. The mission recommends—

(a) development of more tourist attractions in rural areas, e.g. in traditional villages and cultural centres;

(b) inclusion of marketing centres for local products (e.g. Kariokor market in Nairobi) in tourist travel itineraries in order to stimulate demand for locally produced goods and services;
(c) a wider spread of tourist facilities, the building of small hotels and private boarding flats, and decentralisation of tourist services;

(d) higher taxation of goods bought by tourists (Chapter 17); and

(e) more training for services connected with tourism.

Health facilities in rural areas deserve a high priority, especially since there is a serious imbalance in the availability of health facilities and medical staff in different parts of the country. As the basis for redressing these imbalances, we propose—

(a) the establishment of a co-ordination body in the Ministry of Health to integrate the control of communicable diseases and the improvement of environmental health with the activities of the whole range of basic health services; and

(b) the strengthening of the whole network of rural health centres, particularly through the provision of more subordinate staff.

Finally, there is a potential for employment expansion in repair and maintenance services which needs to be exploited by appropriate measures, namely—

(a) encouragement of capital-sharing among small enterprises by providing equipment for hire, linked with central repair and maintenance facilities; and

(b) promotion of small repair workshops through an appropriate tariff policy.

Informal sector

The informal sector provides income-earning opportunities for a large number of people. Though it is often regarded as unproductive and stagnant, we see it as providing a wide range of low-cost, labour-intensive, competitive goods and services. Not only does it provide them without the benefit of the government subsidies and support that are received by many firms in the formal sector, but operators in the informal sector are often harassed and hampered by restrictions imposed from outside (Chapter 13).

We therefore advocate a positive attitude on the part of the Government towards the promotion of the informal sector. Measures recommended towards this goal are to—

(a) cease demolition of informal-sector housing, except in cases in which the land is genuinely required for positive housing development and town planning purposes;
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(b) review trade and commercial licensing with a view to eliminating unnecessary licences, substitute health and safety inspection for licensing;
(c) issue licences to any applicant able to pay the licence fee;
(d) intensify technical research and development work on products suitable for production or use in the informal sector, priority being given to capital and intermediate products, repairs and construction;
(e) induce larger firms to train subcontractors; use industrial estates for promoting subcontractors;
(f) have the Government Tender Board conduct an enquiry into products and services which are now purchased by government agencies at various levels and which could be obtained from enterprises in the informal sector; review the system of government construction contracts; and
(g) substitute direct payment for the government purchasing order system, and increase the preference to local suppliers in government contracts above the current level of 5 per cent.

Education and training

In the chapter on education and training (Chapter 14) we concentrate on a few major problem areas, and have avoided going into secondary issues. This was a deliberate choice because we think that without changes in respect of these major issues, no amount of tinkering and ad hoc measures will solve the problems connected with educational and training policies.

The first main issue relates to the examination and selection system. The certificate of primary education is almost exclusively designed for selection for secondary schools, and ignores the needs of the majority of pupils who will not continue their education beyond the primary level. The effect of the certificate of primary education on the curriculum of primary schools is to strengthen the tendency to gear the entire primary schooling of young people to entering secondary education, instead of preparing them for available employment opportunities, especially in the rural areas and in the informal sector.

The second major issue relates to the dichotomy between formal education and non-formal education and training. As long as the formal education system operates as it does (under the influence of the distorted incentives that exist in the labour market and in society in general), the Harambee secondary schools or village polytechnics will remain poor relations, able to make only little headway. These parallel institutions will strive to imitate the conventional academic schools, and this is unavoidable because it is the sensible thing to do as long as people with formal education are rewarded with higher incomes and better job opportunities than others.
Our main recommendations in the area of education and training policies follow directly from our analysis. They are as follows:

(1) Elimination of the present examination for the certificate of primary education, and the substitution of a completely revised testing procedure at the end of the basic cycle, which in our long-term educational "model" will be of eight to nine years' duration.

(2) A gradual increase in the proportion of the curriculum of the basic cycle devoted to prevocational subjects. Thus emphasis will be put on the interests of the terminal pupils, i.e. those who leave school after finishing the basic cycle.

(3) Pupils completing their upper secondary education must undertake one year of community service as an integral part of their educational career. University graduates must give a second year's service in their home areas.

(4) Creation of a series of second-chance institutions for drop-outs and adults. These institutions would be similar to the village polytechnics. They would be based largely on Harambee and other local self-help efforts. As their name indicates, they would be specifically geared to recuperating early school leavers. Special quotas must be established for pupils leaving the second-chance institutions for the upper secondary and university levels of education. This would be a deliberate step to remove, or at least to minimise, the dichotomy between formal education and non-formal education. These second-chance institutions should also be used to phase into employment the school leavers from the basic cycle.

In order to work out the details of educational reform and plan for its implementation, either a commission or a working secretariat within the Ministry of Education should be set up.

Labour market policies

The wages and salaries structure stimulates the unduly high expectations in terms of financial rewards that exist among school leavers from the academic educational institutions. According to all evidence available, the signals in the labour market stimulate current educational choice and job aspirations. If the financial rewards remain as they are, the educational strategy we have just summarised would be difficult to implement or would lose much of its initial effect. Changes in the structure of financial incentives are suggested under the heading of incomes and wage policy below.

The range of different regulations in force in Kenya on minimum wages and hours of work has led to a fragmentation of the labour market and has had adverse effects on labour mobility.
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In the field of industrial relations, the industrial Court is instrumental in settling trade disputes with due regard to the employment implications.

The employment exchanges (including the Nairobi labour office for women, as well as the Kenyanisation of Personnel Bureau) have so far not been able to play an important role. They prepare monthly reports of a routine and administrative nature, and the collection of employment market data is not properly organised. In fact, there is no clear understanding of the nature and importance of the work involved (Chapter 15).

As for the tripartite agreements of 1964 and 1970, our analysis leads us to the conclusion that agreements of that nature involve the risk of disappointing a good deal of co-operative effort on the part of employers and trade unions if they are not followed up by longer-term complementary measures. Our recommendations with regard to labour market policies are as follows:

(a) all changes in minimum wage regulations should be approved by the Industrial Court;

(b) a subcommittee of the Tripartite Labour Advisory Board should be established to ensure that employment service organisations function more effectively, and to control abuses of private employment exchanges; and

(c) the current tripartite agreements should be followed up with a long-term incomes policy along the lines of the proposals on income and fiscal policy outlined in the following section.

Incomes and fiscal policy

Though the Kenyan Government has on several occasions firmly committed itself to an incomes policy, clear principles on the subject have yet to be formulated and implemented. The mission considers that an incomes policy covering all types of incomes is essential to the implementation of its strategy. As regards wages, the main elements in this policy are more rapid increases among the lower income groups with tapering of rates as incomes increase, and the calculation of real wages by reference to the cost-of-living index of the bottom income groups.

Secondly, an adequate incomes policy should be linked to prices policy. We consider the pros and cons of raising rural incomes by increasing the prices of agricultural products and lowering the prices of agricultural inputs.

Thirdly, to ensure equality and support for the incomes policy it is essential that the gains from wage restraint should not simply lead to an increase in profits. Proposals are made for the control of profits.
Fiscal policy is also important for the redistribution of incomes to the working poor and the mobilisation of resources for employment-creating development projects. The present tax system in Kenya does not have a redistributive effect, nor is its revenue-raising potential adequate to raise the additional financial resources required. Widespread tax evasion and tax avoidance are largely responsible for the low revenue (Chapter 16).

Our specific proposals on incomes and fiscal policy are enumerated below:

(1) A national incomes policy should be formulated and implemented. It should include an over-all limit for maximum increases in real wages per employee of 3 per cent per annum for persons earning less than £200 per annum. There should be no increases in salary scales for five years for persons earning more than £700 per annum; increases for workers earning between £200 and £700 per annum should be less than 3 per cent per annum and governed by considerations of equity, specific skill shortages and the need to eliminate anomalies. The Industrial Court should implement this policy and be given power to review the recommendations of minimum wage boards.

(2) Persons with school certificates or higher qualifications who enter public employment should be paid less than the current rates (e.g. 75 per cent) for a specified period of time.

(3) The Price Control Advisory Committee, in conjunction with the Committee of Protection, should continue to review all price increases. It should establish general criteria governing its decisions, which should be made public. Tariffs should be used to regulate profits and eliminate monopoly profits.

(4) The graduated personal tax should be abolished in the rural areas.

(5) The machinery for tax assessment and collection should be strengthened to increase revenue at existing tax rates.

(6) The import tariff rates should be unified and extended to capital and intermediate goods. A selective subsidy on exports should be introduced, or a dual exchange rate favouring exports.

(7) A progressive sales tax should be introduced on luxury and semi-luxury consumer goods, both imported and locally produced, as well as a sales tax on selected capital goods that have a labour-displacing effect.

(8) Public expenditure should be re-structured in favour of the poorer sections of the population in urban and rural areas, including the least developed regions of the country. The establishment of targets or quotas for expenditure per head in different parts of the country on certain vital services such as education, health, roads, etc., should be considered.
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International policy

The recent balance-of-payments difficulties have drawn attention to international policies and raised the possibility that a development and employment strategy may have to operate under greater foreign exchange constraints in the future than has been the case in the past.

We first consider foreign private investment; more thorough checks on the economic value of investments and more effective negotiations with foreign firms are needed. Tougher requirements may well reduce the total flow, although this will not necessarily happen.

In financial aid, more flexible forms of aid are needed, and here also a policy of greater selectivity is advocated, with a lessening of dependence on large capital inflows. This also applies to technical assistance. If the donors accept the new strategy, the volume of aid need not diminish and its effectiveness would be increased.

Kenya’s system of protection involves the danger of distortions which may be harmful to an employment strategy. Rationalisation of this system will require a willingness on the part of Kenya’s partners in the East African Community and of industrial countries to co-operate in policies resulting in increased export of Kenyan manufactured products.

The position of Kenya under the international coffee and tea agreements is considered, since they determine the prospects for coffee and tea. Kenya’s special claims for favourable quotas under both agreements are emphasised. Other traditional exports are considered, as are some problems arising from Britain’s entry into the European Economic Community and from developments in the East African Community for traditional Kenyan exports (Chapter 17).

The following are our main recommendations:

(a) a flexible foreign exchange rate;
(b) careful screening and selectivity in agreements with foreign investors;
(c) a stronger stand in negotiating with foreign investors, with a view to broadening the range of technical choice and improving terms;
(d) a review of aid policy by donors; an increase in aid contributions to local costs, recurrent expenditures, untied aid, programme aid and longer-term commitments; and channelling of aid through national intermediary institutions;
(e) co-operation by Kenya in the international coffee and tea agreements: as a new and expanding producer, Kenya should be entitled to satisfactory quotas;
(f) emphasis on export-led industrialisation, with special reference to processed agricultural products; and
(g) consideration of a ban on imports of luxury cars.
Access and equity

Fair access to opportunity is intimately involved with the whole range of Kenya's employment problems. Recognising important steps already taken by the Government, the mission recommends a number of additional measures as part of the strategy of redistribution from growth.

Special emphasis is placed on more equal access by girls to education and training. In spite of recent progress, the enrolment of girls is still lagging, especially at the higher levels of primary education as well as in secondary and higher education, and especially in the semi-arid areas.

The disparities in education are reflected in a low participation of women in wage employment in the formal sector, especially in manufacturing. There has been no increase in the proportion of women in such employment since independence. Unemployment among men may itself partly account for this situation. Among the suggestions are—

(a) wider opportunities for Kenya's women for training in agriculture and related rural crafts, and in co-operative organisation, community development and other rural leadership skills;

(b) more openings for educated women in the industrial sector;

(c) in the service sector, more employment for women in health and education and in part-time work;

(d) increased productivity in household tasks, better village water supplies, facilities for food conservation and processing; and

(e) for urban women, self-help crèches and training in family care.

Women's employment would also be assisted by the development of the informal sector. Attention is drawn to the need for greater involvement of women in development activities at the national or local level, e.g. greater participation of women in district planning committees. The establishment of a national women's bureau is supported, as well as a national commission to review the status of women.

Regional imbalance is the second major problem of unequal access. This is particularly serious, because it is intertwined with tribalism and rural-urban migration. Data are given showing regional imbalance in primary-school enrolment and in the provision of health services. The following three lines of action are indicated:

(1) The construction of new facilities in the disadvantaged districts and locations, including special support for the Harambee movement in those places and special incentives to professional staff (doctors, teachers, extension workers) to work in those districts. There will be a need also for more research
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directed at the special problems—for example in health, agriculture, and education—of the semi-arid and other disadvantaged areas.

(2) A quota system, not only for access to education (Chapter 14) but also in recruitment to the Civil Service, and perhaps most important, for government expenditures in Nairobi (restrictive ceiling quota) and the disadvantaged areas (higher minimum quota) respectively.

(3) Controlled migration and redistribution of population, again with the judicious use of quotas (Chapter 10).

Rural development and planning

The Special Rural Development Programme in Kenya is already symbolic of the principle of integrated rural development. We consider three main types of action, viz. famine relief, rural works and the provision of rural amenities, which are designed to supplement the agricultural measures considered earlier.

Rural works programmes, e.g. road construction, bush clearing and soil conservation from district to village level, would directly benefit the local population. Our proposed approach towards these works is to initiate them, if possible, well in advance of desperate need, so that cash wage payments can relieve the impact of famine. Those works should also be synchronised with the supply of and demand for agricultural labour, so as to avoid seasonal bottlenecks. Thirdly, an indiscriminate mixing of self-help schemes and public works projects is likely to be harmful to the successful implementation of each. We recommend a national policy for rural works which spells out cases in which cash payments will or will not be desirable, especially when self-help, government finance and semi-skilled workers are involved.

Like the construction of rural works, the development of rural amenities also needs to be linked to regional development. Promotion of rural welfare through such amenities as better housing, electricity, piped water and marketing centres will help to raise rural living standards.

All the above three programmes, which are three components of integrated rural development, call for strong decentralised planning at the district and local levels. Decentralisation in planning and plan implementation should go together with increased powers to make financial decisions at the district and local levels (Chapter 19).

Our detailed recommendations are as follows:

(1) The East African Meteorological Department should receive support for siting some new stations in areas of highest famine potential, in order to provide technical support for future programmes of experimentation with dry
land farming techniques, and also to contribute to systematic early warning of famines.

(2) The Treasury should make special financial provision for famine relief, since it is not possible to forecast the occurrence and acuteness of a drought much in advance. The Government should prepare ready-made projects to be implemented when a regional cash or food shortage is predicted.

(3) Public works should generally be performed in the agricultural slack season, before planting starts, so that the money from wages can be used for investment in seed, fertilisers, ploughing and weeding, thus reducing the need for agricultural credit programmes. This possibility should be examined thoroughly, especially in areas where programmes for Katumani or hybrid maize and road projects are planned.

(4) A ranch bush-clearing labour subsidy, as recommended by the Select Committee on Unemployment, has the full support of the mission.

The cost of inaction

A recapitulation of the most important recommendations of the report shows that the suggestions made are far-reaching, often breaking with familiar traditions and carrying the risks of offending important sectional interests. But the employment problem in Kenya is not of the transitional, self-healing kind. The longer action is delayed, the greater the difficulties and costs of dealing with it. The problem must, however, be seen in context, which in the case of Kenya is a need for vigorous over-all growth and for progress regarding wider access and the situation of lower-income groups. This growth and progress provide a basis for the action which is now needed.

In the past, since independence, many favourable factors have repeatedly released forces that have kept troubling problems of employment and imbalance within manageable proportions. It would not be safe to rely on the continued emergence of new favourable factors in the future, although to the extent that they support and supplement deliberate action now taken they will be helpful.

There are disquieting features in the present situation which make action urgent now: the rapid increase in population in relation to the limited supply of high-potential land; the possibility of more serious foreign exchange constraints in the future than in the past; the accumulating frustrations of the swelling number of youths with education-fed high aspirations for modern jobs. Much of the action to be taken is of a long-term nature—that directed towards economic independence, the re-structuring of industry and the development of an indigenous technological capacity. To make noticeable progress with such long-term tasks in 20 years' time, a beginning must be made now. It is also necessary
to prevent inappropriate and unduly rigid structures from being created now (Chapter 20).

For all these reasons, timely action on the lines of the employment strategy suggested in this report seems to us necessary. We would emphasise that in our view there is every prospect that its objectives can be achieved in a context of continued growth.

CONCLUSION

It is clear from the foregoing that we have travelled far beyond the confines of the employment problem narrowly defined. This is inevitable since employment, in our analysis of the Kenyan situation, is inseparable from an over-all strategy of economic and social development. Thus, any frontal attack on the problem of unemployment and employment in Kenya has to deal with the whole gamut of measures related to economic and social inequalities, equity and low incomes.
SCOPE AND NATURE OF THE PROBLEM
RURAL EMPLOYMENT PROBLEMS

Ninety per cent of the population of Kenya still lives in rural areas and earns its livelihood predominantly from agriculture. In mid-1972 the rural population of 11 million people already numbered 750,000 more than at the time of the population census taken three years earlier. Kenya's rapid rate of population growth—even allowing for migration—means that access to land, which is very closely related to the pattern of rural employment and income-earning ability, will become increasingly important.

In 1969 there were 1.7 million rural households, which included 4.4 million adults, of whom a majority (2.3 million) were women. As far as we can ascertain, the vast majority of these households were owners or occupiers of land. Although land registration is incomplete, most informed sources estimate that in 1969 there were approximately 1.2 million settled agricultural holdings in Kenya. Assuming one household per holding, roughly 70 per cent of the 1.7 million households would have had a base for agricultural incomes and self-employment. There were also some 220,000 households (12 per cent of rural households) living as pastoralists in the semi-arid or arid areas of the country.¹

Of Kenya's total land area of 569,000 km², only about 7 per cent can be described as good agricultural land in the sense that it has adequate and reliable rainfall and good soils and is not steeply sloping. A further 4½ per cent is suited for crop production but is in areas where in some years rainfall will prove inadequate and crop failure may ensue. From an agricultural point of

¹ The implication of this is that very approximately 300,000 households are "landless". In the absence of firm data this figure can be taken only as a rough order of magnitude. It is really an indication of the number of households who do not "own" land in a legal sense in areas where land titles are registered, or in a customary sense in areas where they are not. Many of these people still have access to small plots of land, or shambas. Another category of "landless" rural households may be employees on large farms (see table 6) who customarily have access to a plot of land which is usually used for food production. Many other employees working outside their home area may also be "landless".
view the remaining land, in the absence of irrigation or water conservation, is suited only to stock raising at varying levels of intensity, depending mainly on rainfall and also on soil type. Land use declines to a very low level on the 60 per cent of Kenya's land area which can best be described as semi-desert. This pattern of the land's agricultural potential is of crucial importance for employment, since there are only limited possibilities of extending the frontier of usable land, at least in the short run.

Population density in the settled agricultural areas still bears the marks of the colonial heritage. A large part of the rural population is concentrated in places which before the achievement of national independence formed the "African reserves". In most of these areas population density is very high in relation to the availability of good agricultural land per person, as shown in table 1. In contrast, districts such as Laikipia, Nakuru, Nyandarua, Trans-Nzoia and Uasin Gishu, which were once reserved almost exclusively for Europeans and formed the "Scheduled Areas", are still characterised by relatively lower population densities in relation to available land. Finally, there are districts like Lamu, Narok, Samburu, and Tana River, which contain large amounts of potentially good agricultural land but which were formerly reserved for certain of the pastoralist tribes or were Crown lands on which settlement was not encouraged. These districts have the lowest population densities of all. Thus while on average 0.8 hectare of good agricultural land (measured in high-potential land equivalents) was available for each member of the rural population in 1969, there was over nine times this area available per person in Narok. On the other hand, in land shortage districts like Kakamega, Kiambu, Kisii, Machakos, Meru and Nyeri, the availability of good land was only about half of the national average.

This difference in the availability of land is also reflected in the size of holdings in districts outside the former Scheduled Areas. In some districts most of the holdings are very small: well over half of all the holdings in Kiambu, Muranga, Nyeri, Siaya, Kisii and Kakamega are less than 2 hectares in size. In other areas such as South Nyanza, Bungoma, Busia, Kericho and Nandi, under a third of the holdings are less than 2 hectares in size.¹

A full picture of land distribution or ownership cannot be given because of incomplete land registration. But the size distribution of farms, shown in table 2, together with that of registered small holdings shown in table 3, reveals the degree of concentration of land.

As regards large-scale mixed (crop and livestock) farms, even today 1,540 account for just over 1 million hectares of land. Of these, 1,234 farms covering 500,000 hectares of land are now owned by Africans as individuals or through

¹ See Technical Paper 1, table 1.
### Table 1. Estimated availability of good agricultural land, by district, 1969
(Hectares of high-potential land equivalents *)

<table>
<thead>
<tr>
<th>District</th>
<th>Hectares (thousands)</th>
<th>Hectares per person</th>
<th>District</th>
<th>Hectares (thousands)</th>
<th>Hectares per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narok</td>
<td>915</td>
<td>7.3</td>
<td>Kwale</td>
<td>163</td>
<td>0.8</td>
</tr>
<tr>
<td>Lamu</td>
<td>74</td>
<td>3.3</td>
<td>Bungoma</td>
<td>253</td>
<td>0.7</td>
</tr>
<tr>
<td>Tana River</td>
<td>119</td>
<td>2.4</td>
<td>Elgeyo Marakwet</td>
<td>105</td>
<td>0.7</td>
</tr>
<tr>
<td>Samburu</td>
<td>156</td>
<td>2.2</td>
<td>Embu</td>
<td>103</td>
<td>0.6</td>
</tr>
<tr>
<td>Laikipia</td>
<td>138</td>
<td>2.1</td>
<td>Kiserian</td>
<td>107</td>
<td>1.3</td>
</tr>
<tr>
<td>Uasin Gishu</td>
<td>327</td>
<td>1.7</td>
<td>Siaya</td>
<td>438</td>
<td>0.6</td>
</tr>
<tr>
<td>Trans-Nzoia</td>
<td>208</td>
<td>1.7</td>
<td>Kilifi</td>
<td>162</td>
<td>0.5</td>
</tr>
<tr>
<td>Nyandarua</td>
<td>265</td>
<td>1.5</td>
<td>Muranga</td>
<td>217</td>
<td>0.5</td>
</tr>
<tr>
<td>West Pokot</td>
<td>107</td>
<td>1.3</td>
<td>Kirinyaga</td>
<td>100</td>
<td>0.5</td>
</tr>
<tr>
<td>Baringo</td>
<td>190</td>
<td>1.2</td>
<td>Taire</td>
<td>50</td>
<td>0.5</td>
</tr>
<tr>
<td>Nandi</td>
<td>234</td>
<td>1.1</td>
<td>Meru</td>
<td>263</td>
<td>0.4</td>
</tr>
<tr>
<td>Nakuru</td>
<td>301</td>
<td>1.0</td>
<td>Nyeri</td>
<td>160</td>
<td>0.4</td>
</tr>
<tr>
<td>Kitui</td>
<td>305</td>
<td>0.9</td>
<td>Kakamega</td>
<td>325</td>
<td>0.4</td>
</tr>
<tr>
<td>South Nyanza</td>
<td>567</td>
<td>0.9</td>
<td>Machakos</td>
<td>284</td>
<td>0.4</td>
</tr>
<tr>
<td>Busia</td>
<td>163</td>
<td>0.8</td>
<td>Kiambu</td>
<td>170</td>
<td>0.4</td>
</tr>
<tr>
<td>Kericho</td>
<td>380</td>
<td>0.8</td>
<td>Kisii</td>
<td>220</td>
<td>0.3</td>
</tr>
</tbody>
</table>

* This table has been calculated on the assumption that 5 hectares of medium-potential land and 100 hectares of low-potential land are equivalent to 1 hectare of high-potential land. This is admittedly a crude weighting system, but probably adequate for establishing broad orders of magnitude. Districts with virtually no land of high or medium potential have been excluded.


Companies, partnerships and co-operatives, while 295 farms covering 400,000 hectares are occupied by citizens of European origin and non-citizens. The remaining farms are owned by the State.

In addition, there are some 1,500 large tea, coffee and sugar estates mainly owned by companies, as well as large commercial ranches in the drier parts of the former Scheduled Areas.

From this and other information, we may piece together a general picture of incomes and employment in the small-holding sector. At the top, there is a group of farmers, mainly in the high-potential areas, who have rapidly increased their incomes over the past decade. These are for the most part farmers who have benefited from settlement and irrigation schemes or from land registration. Their cash incomes are derived from the sale of coffee, tea, livestock and dairy products, pyrethrum, maize and other cash crops. These farmers appear to number some 225,000, or about a fifth of all smallholders. Theirs tend to be the holdings where workers are hired on a full-time basis, and also on a seasonal basis to assist with farm work. On a number of these holdings, workers

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1 See also Chapter 5.
### Table 2. Size distribution of farms, 1970

<table>
<thead>
<tr>
<th>Size of farm (hectares)</th>
<th>No. of farms</th>
<th>Percentage of all farms</th>
<th>Estimated total area (thousand hectares)</th>
<th>Percentage of all farm land</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-19</td>
<td>417</td>
<td>13.1</td>
<td>4</td>
<td>0.2</td>
</tr>
<tr>
<td>20-49</td>
<td>324</td>
<td>10.2</td>
<td>11</td>
<td>0.4</td>
</tr>
<tr>
<td>50-99</td>
<td>304</td>
<td>9.6</td>
<td>23</td>
<td>0.8</td>
</tr>
<tr>
<td>100-199</td>
<td>364</td>
<td>11.5</td>
<td>54</td>
<td>2.0</td>
</tr>
<tr>
<td>200-299</td>
<td>321</td>
<td>10.1</td>
<td>80</td>
<td>3.0</td>
</tr>
<tr>
<td>300-399</td>
<td>253</td>
<td>8.0</td>
<td>88</td>
<td>3.3</td>
</tr>
<tr>
<td>400-499</td>
<td>218</td>
<td>6.9</td>
<td>98</td>
<td>3.6</td>
</tr>
<tr>
<td>500-999</td>
<td>498</td>
<td>15.7</td>
<td>373</td>
<td>13.9</td>
</tr>
<tr>
<td>1000-1999</td>
<td>243</td>
<td>7.6</td>
<td>364</td>
<td>13.5</td>
</tr>
<tr>
<td>2000-3999</td>
<td>107</td>
<td>3.4</td>
<td>321</td>
<td>11.9</td>
</tr>
<tr>
<td>4000-19999</td>
<td>111</td>
<td>3.5</td>
<td>1273</td>
<td>47.3</td>
</tr>
<tr>
<td>20000 and over</td>
<td>15</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>All sizes</strong></td>
<td><strong>3 175</strong></td>
<td><strong>100.0</strong></td>
<td><strong>2 690</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

1 This was estimated by multiplying the number of farms in each group by the average size of holdings in that group, as given by the mid-point in each size group. The residual land was attributed to farms with 4,000 hectares and more.

Source: Calculated from Statistical abstract, 1971, table 84.

### Table 3. Size distribution of registered small holdings, 1969

<table>
<thead>
<tr>
<th>Size (hectares)</th>
<th>Number</th>
<th>Total area</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute figures</td>
<td>Percentages</td>
<td>Absolute figures</td>
</tr>
<tr>
<td></td>
<td>(thousands)</td>
<td></td>
<td>(thousand hectares)</td>
</tr>
<tr>
<td>0.0-0.49</td>
<td>91</td>
<td>11.7</td>
<td>28</td>
</tr>
<tr>
<td>0.5-0.99</td>
<td>121</td>
<td>15.5</td>
<td>89</td>
</tr>
<tr>
<td>1.0-1.9</td>
<td>192</td>
<td>24.6</td>
<td>274</td>
</tr>
<tr>
<td>2.0-2.9</td>
<td>128</td>
<td>16.4</td>
<td>303</td>
</tr>
<tr>
<td>3.0-4.9</td>
<td>104</td>
<td>13.3</td>
<td>404</td>
</tr>
<tr>
<td>5.0-9.9</td>
<td>88</td>
<td>11.3</td>
<td>629</td>
</tr>
<tr>
<td>10 and over</td>
<td>54</td>
<td>7.0</td>
<td>923</td>
</tr>
<tr>
<td><strong>All sizes</strong></td>
<td><strong>777</strong></td>
<td><strong>100.0</strong></td>
<td><strong>2 646</strong></td>
</tr>
</tbody>
</table>

1 Column totals may not add up exactly owing to rounding.


are hired to replace the manual labour of the farmer, and sometimes of other members of the farm family, because the farmer has found a more lucrative outlet for his time than labouring on his own farm.
This is well illustrated in a survey of non-agricultural rural enterprises, which revealed that nearly 75 per cent of the 51,000 businesses were owned by farmers either individually or in partnership. As table 4 shows, there were 68,000 people classified as self-employed in these businesses, as well as 38,000 family workers. Many employees in the modern rural sector, such as school teachers, also hire labour to work on their farms.

Below the smallholders with the largest incomes there are a substantial number of smallholders who have been able to commercialise their operations to some extent, but so far with only limited effects on returns. For a variety of reasons—insufficient or poor land, or lack of knowledge or capital, for instance—their incomes from farming are limited to around £60 to £110 per year.¹ Very roughly 250,000 smallholders are in this category.² They may hire seasonal labour, but rarely permanent. In many instances payment for this seasonal labour will be in kind, or under some arrangement for mutual help.

Finally we come to the majority of farming families, in the medium-potential areas or with very small plots in the high-potential areas, who at present lack the ability to raise the productivity of their land more than marginally. Their income from farming their own land is usually less than £60 a year including the value of food crops. The number of small holdings in this category would appear to be in the region of 620,000. It is inevitable that at this low level of agricultural production and income these families must either exist in extreme poverty or must obtain income from sources other than their own farms by seeking work in the rural areas or in the towns. Many will also receive some share of the £18 million remitted each year to the rural areas by household members working in towns. Unfortunately, it is not possible to specify more precisely how many of these rural families receive additional incomes in these ways and how many families do not. But it is clear that among this large group


¹ All references to pounds or shillings are in Kenyan currency unless otherwise indicated.
² Our estimate is that there are 360,000 households with holdings between 2 and 5 hectares. Not all of those, of course, will be progressive farmers.
Employment, incomes and equality

of rural families there are at least some who do not have additional incomes, or who are squatters on land which they do not own, or who are completely landless. This group comprises most of the people whom we refer to in this report as the "rural working poor". They account for most of the "employment" problem as it exists in Kenya today.

Wage employment

Fortunately there are already a significant number of opportunities of wage employment in the rural areas to provide additional incomes for at least some of this group. These opportunities are found on small holdings, in small-scale rural enterprises and in employment in the formal sector, both on the large farm and in various forms of commerce, industry and services. The largest of these sources of rural wage employment is on small holdings. Information on these is shown in table 5, drawn from an annual sample survey of such farms. As the enumeration is carried out during the off-peak period between planting and harvesting, it misses what are undoubtedly higher levels of casual employment at the planting, weeding and harvesting stages. There is also reason to believe that the enumeration tends to underestimate even the numbers employed on a permanent basis on the small holdings. When allowance is made for these various sources of underestimation, the actual peak annual employment on small holdings would probably be in the neighbourhood of 450,000-500,000.

The average earnings of these employees are also extremely low—barely £40 a year even for adult permanent workers. However, for people with no access to cash incomes and very limited access to food, any opportunity to work, even for this amount of money, can be important. If most of these workers are drawn from the poorest families, then the total wage bill from smallholder employment of about £9 million in 1969 would be a substantial addition to the incomes of this group.

Wage employment on small holdings is not the only source of cash income in the rural areas, for there is a useful amount of wage employment, with a total wage bill of nearly £5 million per annum, in small non-agricultural rural enterprises (especially in commerce, manufacturing and services) as shown in table 6.

As with small farm employment, this is probably an underestimate because there are several activities such as forestry and charcoal burning that are carried out in remote areas. After allowing for deficiencies in coverage it may be assumed that there are about 100,000 persons employed in this sector.

There is a substantial amount of employment in the formal sector in the rural areas, with wage jobs for 323,000 people in 1969, as shown in table 7. Total earnings from this employment amount to £43 million. Of these people,
Rural employment

Table 5. Wage employment and annual earnings on small farms and settlement schemes, 1969

<table>
<thead>
<tr>
<th>Category of workers</th>
<th>Numbers employed (thousands)</th>
<th>Earnings per year *</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total (£m)</td>
<td>Average (£)</td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>186</td>
<td>4.7</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Casual</td>
<td>192</td>
<td>4.4</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>378</td>
<td>9.1</td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

* Estimates based on two enumeration days, one day each of the 1969 short rains and 1970 long rains cycles.


Table 6. Wage employment and annual earnings in small non-agricultural rural enterprises, 1969

<table>
<thead>
<tr>
<th>Category of workers</th>
<th>Numbers employed (thousands)</th>
<th>Earnings per year</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total (£m)</td>
<td>Men 1</td>
<td>Women 1</td>
<td>Juniors 1</td>
</tr>
<tr>
<td>Regular</td>
<td>48</td>
<td>3.2</td>
<td>47</td>
<td>34</td>
<td>19</td>
</tr>
<tr>
<td>Casual</td>
<td>34</td>
<td>1.5</td>
<td>37</td>
<td>34</td>
<td>33</td>
</tr>
<tr>
<td>All</td>
<td>82</td>
<td>4.7</td>
<td>43</td>
<td>34</td>
<td>27</td>
</tr>
</tbody>
</table>

1 Excluding rations. 2 Including rations.

Source: Survey of non-agricultural rural enterprises, 1969.

57 per cent were working in agriculture, that is mainly on estates and on large mixed farms, with average annual earnings of £69. Employment in large-scale agriculture has declined in recent years with the reduction in the area of large mixed farms and the decline in the sisal industry, but the demand for labour on tea estates has risen and can be expected to rise steadily over the next decade. The majority of the large number of people employed in the service sector are central government and local authority employees.

In short, we find that in rural areas in 1969, 657,000 people were engaged in regular wage employment and a minimum of 226,000 in casual wage employment for at least part of the year. Since the adult population amounts to 4.4 million people, this means that about 15 per cent of the potential rural labour force 1 are engaged in regular wage-earning activities in the rural areas, and a further 5 per cent find casual employment there. The availability of wage employment is spread throughout the country, but with enough jobs for only 13 per cent of the adult population in the Nyanza and Coast Provinces. The

1 That is, all males and females in the 15-59 age group.
Employment, Incomes and equality

Table 7. Employment and annual earnings in the formal sector in rural areas, 1969

<table>
<thead>
<tr>
<th>Industry</th>
<th>Number (thousands)</th>
<th>Average earnings (£ per annum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>185</td>
<td>69</td>
</tr>
<tr>
<td>Mining</td>
<td>1</td>
<td>397</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>12</td>
<td>227</td>
</tr>
<tr>
<td>Construction</td>
<td>1</td>
<td>797</td>
</tr>
<tr>
<td>Electricity and water</td>
<td>1</td>
<td>509</td>
</tr>
<tr>
<td>Commerce</td>
<td>5</td>
<td>118</td>
</tr>
<tr>
<td>Transport</td>
<td>7</td>
<td>455</td>
</tr>
<tr>
<td>Services</td>
<td>112</td>
<td>201</td>
</tr>
<tr>
<td>All industries</td>
<td>323</td>
<td>134</td>
</tr>
</tbody>
</table>

The total does not add up exactly owing to rounding.

Source: Annual enumeration of employees (unpublished).

The highest percentage of rural wage employment is found in the Central Province, where there is such employment for 23 per cent of the adult population. The total African wage bill for the rural areas in 1969 was about £55 million out of a total African rural income of £230 million.¹

Both the size of wage employment and the wage bill are encouragingly high, even if the average earnings in most of the occupations are substantially lower than those obtained for most urban occupations. The casual nature of much of this employment and turnover rates of about 60 per cent per annum in agriculture suggest that in time a substantial number of those who need access to wage employment can obtain it. This possibility diminishes the risk, which is especially high with Kenya's variable climate, that they may have to rely entirely on the production of a small farm; it also reduces to some extent the necessity of migrating to urban areas in search of work, and provides a means of obtaining cash which is the key to advancement and higher living standards for most poor people.

Seasonality of labour demand and supply

There are, however, several factors which make it difficult for a person to take wage employment or for employers, particularly smallholders, to expand the number of people they employ. The major factor on both sides is probably seasonality. In a monsoon climate, peak periods of labour demand are at times of planting, weeding and harvesting. This applies particularly to food crops, especially hybrid maize. Thus the demand for hired labour, especially casual

¹ See Technical Paper 1.
labour, is frequently at its peak just at the time when the need for potential wage earners to work their own family holdings is at its highest. This difficulty tends to bear most heavily on those, such as the women who head 400,000 rural households, who would benefit most from an additional source of cash income. In the vast majority of these cases the male head of the household, perhaps with other adult male members of the family, seems to have migrated to urban areas in search of work. This leaves a depleted family labour force who at peak work times may not be able to cultivate and tend all the family land properly, even if there is only a hectare or so. The results of such neglect can be sizeable. In Vihiga, with an extremely high population density, small plot sizes and a very large number of adult males away in towns, it is estimated that 30 per cent of the land on individual holdings remains uncultivated. If these seasonal peaks could be reduced or staggered, more land could be cultivated, or casual wage employment could be obtained on other farms. On a national scale this could substantially increase the amount of employment and income generation in the economy.

There are various ways in which the seasonality of labour demand could be reduced. Although on the average they require larger labour inputs per hectare, many cash crops, especially tea and pyrethrum, have a less fluctuating pattern of labour requirements than food crops. Both farms and districts which have a relatively small variety of crops tend to have markedly seasonal labour requirements for crop work because of the dominance of maize in the cropping pattern (see for instance the figures for Siaya in table 8). Districts with a high degree of crop diversity have more crops and hence a steadier requirement for labour throughout the year. Livestock also demands a relatively constant amount of attention throughout the year, as does farm maintenance work because it tends to be fitted into slack periods.

Accordingly, development to increase the diversity of crops in an area and to increase the percentage of cash crops or the intensive rearing of livestock is likely both to increase the demand for labour and to reduce the fluctuations over the year. The encouragement of activities which yield a steady stream of income throughout the year, e.g. the production of milk and tea, are also conducive to the hiring of labour, since there is a regular fund from which wages can be paid.

There are also factors that affect the supply of labour through the year. Supply shifts are related to the demand for cash to meet school fees at the beginning of school terms (although rural families having relatives with urban jobs may expect remittances from them for school fees), and to the demand for food from families on very small farms who have exhausted supplies from one season’s maize harvest before the next season’s bean crop has matured. Drought in one district may cause farmers to move to other districts to look
for casual work. There is also reason to believe that the ebb and flow of urban job seekers to towns is related to the peak and slack periods of their local agricultural calendar.

An important question is whether districts with marked peaks of labour demand for hired workers experience labour shortages at these times. Data on wages in small-scale agriculture from the farm enterprise costs survey are too sketchy to show whether daily wages increase at peak times, as would be the case if labour was scarce, and it would be asking too much of the data on labour-land coefficients to attempt to match district agricultural labour profiles with apparent labour availabilities. The limited indirect evidence we have on this seems to suggest that labour shortages at peak times are not very important in Kenyan agriculture.

This view of the labour market situation at peak times receives support from estate agriculture, where from time to time one hears reports of coffee farmers short of labour for harvest. Discussions with a manager of a large group of estates, and with the Coffee Board, indicate that this shortage is more apparent than real: we could discover no unambiguous evidence of a farmer's losing crops owing to shortage of labour, or of high rates of pay being offered to recruit labour for the harvest. The shortages of labour on tea and pineapple estates that are occasionally reported in the Press are symptomatic of the general reluctance of unemployed persons to take up ill-paid jobs in agriculture, and of the general occupational immobility and ignorance of rural workers, rather than a reflection of peak demand.

Table 8. Estimated monthly variations in the index of total labour demand for crop work in certain districts, 1969-71 (District monthly average = 100)

<table>
<thead>
<tr>
<th>Month</th>
<th>Bungoma</th>
<th>Kiambu</th>
<th>Kisii</th>
<th>Siaya</th>
<th>Nyeri</th>
<th>South Nyanza</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>167</td>
<td>102</td>
<td>135</td>
<td>369</td>
<td>142</td>
<td>175</td>
</tr>
<tr>
<td>May</td>
<td>183</td>
<td>93</td>
<td>130</td>
<td>267</td>
<td>111</td>
<td>148</td>
</tr>
<tr>
<td>June</td>
<td>151</td>
<td>118</td>
<td>120</td>
<td>85</td>
<td>109</td>
<td>132</td>
</tr>
<tr>
<td>July</td>
<td>98</td>
<td>108</td>
<td>102</td>
<td>104</td>
<td>97</td>
<td>136</td>
</tr>
<tr>
<td>August</td>
<td>85</td>
<td>111</td>
<td>100</td>
<td>80</td>
<td>96</td>
<td>144</td>
</tr>
<tr>
<td>September</td>
<td>123</td>
<td>105</td>
<td>100</td>
<td>92</td>
<td>100</td>
<td>127</td>
</tr>
<tr>
<td>October</td>
<td>112</td>
<td>103</td>
<td>103</td>
<td>76</td>
<td>99</td>
<td>95</td>
</tr>
<tr>
<td>November</td>
<td>72</td>
<td>93</td>
<td>96</td>
<td>17</td>
<td>84</td>
<td>58</td>
</tr>
<tr>
<td>December</td>
<td>65</td>
<td>95</td>
<td>96</td>
<td>12</td>
<td>89</td>
<td>44</td>
</tr>
<tr>
<td>January</td>
<td>48</td>
<td>101</td>
<td>90</td>
<td>24</td>
<td>81</td>
<td>39</td>
</tr>
<tr>
<td>February</td>
<td>45</td>
<td>77</td>
<td>62</td>
<td>11</td>
<td>91</td>
<td>51</td>
</tr>
<tr>
<td>March</td>
<td>50</td>
<td>94</td>
<td>67</td>
<td>64</td>
<td>102</td>
<td>49</td>
</tr>
</tbody>
</table>

Source: Technical Paper 2, table 52.
Nevertheless, the extent of wage employment opportunities in the rural areas should not be allowed to detract from the fact that many rural people are desperately searching for, or are in need of, ways of improving their standard of living; and their number could rise rapidly as the rural population expands unless action is taken to alleviate the problem. Moreover, for many people, especially the young and more educated, the income to be earned from either self-employment or wage employment in the rural areas falls far short of their aspirations. It is this group which provides most of those who migrate to the urban areas in search of work.
The process of rural-urban migration now under way in Kenya involves a rapid shift of people towards the larger towns, especially Nairobi and Mombasa. The movement is massive and involves all kinds of people—young, old, male, female, the educated and the illiterate, the landless and those with large holdings. Yet there are significant proportions: many of the migrants are young; men migrate far more frequently than women; surveys cited later show conclusively that the likelihood of migration increases very rapidly with the level of educational attainment, and that Nairobi attracts a very large share of those with secondary or higher education.

Table 9, based on a random sample of migrants in eight of the largest towns, clearly shows that the desire for a job and inability to find work in the rural areas is the most common reason given for migration. A felt lack of social amenities, and even of schools, is not of much importance. For men with only a primary-school education and for older persons, landlessness is of slightly greater importance than for the younger or better educated men, though it never assumes large proportions as a first reason for migrating.

One has to be careful in interpreting survey findings like those reported in table 9. Most respondents have complex reasons for migrating. Landlessness is particularly difficult to interpret since over 80 per cent of the sample migrants were between 15 and 30 years of age; many of them had fathers still living and in control of land that the migrants might expect to use and eventually to inherit, even though they considered themselves as being without land at the time. Indeed, when asked about land held by their fathers, about half of the migrants reported that their fathers had land, and more than a quarter indicated that their fathers had about 5 hectares or more. Only 17 per cent of fathers were reported as being in business or employed for wages.

1 In the areas where land registration is complete, about 19 per cent of households have small holdings of 5 acres or more.
Employment, Incomes and equality

Table 9. Reasons for migration among male urban migrants aged 15 to 50, by educational attainment and age group, 1970
(Percentages)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Education</th>
<th>Age</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary</td>
<td>Secondary</td>
<td>15-22</td>
</tr>
<tr>
<td>Could not find work</td>
<td>82.8</td>
<td>76.1</td>
<td>79.9</td>
</tr>
<tr>
<td>Land was not available</td>
<td>3.5</td>
<td>2.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Could not enter school</td>
<td>2.9</td>
<td>8.1</td>
<td>7.3</td>
</tr>
<tr>
<td>Schools not available or of poor quality</td>
<td>0.5</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Lack of social amenities</td>
<td>—</td>
<td>0.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Other</td>
<td>10.3</td>
<td>12.3</td>
<td>10.3</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>


From this it seems that only a minority of male urban migrants are completely landless and without future prospects of acquiring land by gift or inheritance. The majority of migrants are likely to have some land, at least in the long run. This may explain much of the reverse flow of migration after the age of 40, as well as the low rates of rural-urban migration of women. About half of the men in the sample were married, but well over half (60 per cent) of those who were married had left their wives in the country.

Most migrants tend to seek employment first in the town nearest to their rural residence, partly because they have less far to travel but also because they can thus be sure to find a number of kinsmen, friends and others who speak their own language and who will provide a place to stay and aid in seeking a job. This short-distance migration is very striking. In the survey quoted earlier, 43 per cent of immigrants in Nairobi came from Central Province, 66 per cent of those in Kisumu came from Nyanza Province, 42 per cent of those in Thika came from Central Province and 50 per cent of those in Mombasa came from the Coast or Eastern Provinces.

Yet migration from certain areas is so high that substantial numbers of migrants from those areas are found in almost every town, regardless of distance. Nearly a third of all migrants in Rempel’s sample \(^1\) came from Central Province and over half from Nyanza, Western Province and Eastern Province. There are very few emigrants from some other areas. Most emigrants come from areas of very high population concentration, and it is primarily employment that these men seek. In fact, over three-quarters of the migrants surveyed would have preferred to stay in their home areas if they could have had a job

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\(^1\) See table 9.
there with the same pay. Only 7 per cent preferred living in town "because living conditions are better there", and less than 4 per cent "because there are more things to do there".

Table 10 makes clear that male urban migrants have substantially more education than the male population as a whole, and that Nairobi draws more highly educated men than do urban centres generally. Judging from the survey data, the chance that someone with nine years or more of schooling will migrate is about five times greater than for someone with less education and over twenty times greater than for someone without schooling—even allowing for the different age composition of the group of migrants and of the total population shown in the table. The men who lack the most minimal educational qualifications no longer migrate at all in significant numbers in search of urban employment.

The greater tendency of the more educated to migrate is in part explained by the pull of higher earnings and better prospects for educated persons in the towns, at least in recent years. In this regard, the migration of the educated is a particular example of the general tendency of persons to migrate when the return they can expect from migration exceed their costs. The gains from such migration are usually much greater for the more educated than for those with less education. But in spite of a widespread consensus on the importance of this economic motivation as the major factor in migration, it is possible to over-emphasize its significance by too exclusive a preoccupation with money returns or by too confidently rejecting any independent influence of education on the desire to migrate. We still have too little data on the relations between inter-district migration and, for instance, average district incomes or the proportion of small holdings with female heads. As regards education, a simple correlation between rates of migration and economic returns is no proof that education does not influence attitudes. As Chapter 4 suggests, this is yet another subject on which the evidence is less clear than the views both of the practical men and of some of the academic theorists.

The process of selective migration adds to rural problems by leaving behind the uneducated, the very young, the old and a disproportionate number of women. Women are left to operate households and small holdings alone or with the aid of hired labour and occasional visits from their husbands during periods of peak labour demand on their farms. The number of people living in split rural-urban households is very large. The 1969 census showed that about 525,000 rural households were headed by women. At a rough estimate, 400,000 of these—about a third of all rural households—could be households whose male head was away in town. ¹

¹ The remainder being polygamous households and households in which the husband had died or was living elsewhere in the rural areas.
Table 10. Distribution of male migrants by years of schooling, as compared with the national average, 1969-70 (Percentages)

<table>
<thead>
<tr>
<th>Category of persons</th>
<th>None</th>
<th>1-4</th>
<th>5-8</th>
<th>9 or more</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migrants:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nairobi only</td>
<td>10.8</td>
<td>13.5</td>
<td>41.7</td>
<td>34.0</td>
<td>100.0</td>
</tr>
<tr>
<td>8 major towns</td>
<td>12.7</td>
<td>14.8</td>
<td>47.1</td>
<td>25.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total population:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban and rural</td>
<td>67.9</td>
<td>19.7</td>
<td>11.4</td>
<td>1.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>


Intensive studies of selected areas of Nairobi have shown that many of these men regularly send money to their wives and families in a rural home. A recent random survey of low and middle income groups in Nairobi showed that about 21 per cent of the urban wage bill is remitted in this way, mainly for tax, school fees and expenditure on the family farm.

It is clear from this that the majority of urban migrants retain strong connections with their area of rural origin, and expect to return there themselves after a long period in town—perhaps as much as two decades. Many have not ruled out the possibility of farming their own land at some time.

But meanwhile in the town rapid and selective migration creates a great deal of urban strain. We take up the urban employment problems—in particular unemployment and low incomes from work—in the next chapter. But before turning to that, let us not lose sight of the enormous numerical impact of this migration on the growth of Kenya’s towns.

Between the census of 1948 and that of 1962 the African population of towns with populations of 2,000 or more rose from 3.1 to 5.3 per cent of the total African population. None of the eight largest towns grew by less than 6 per cent per year during this period, and some of the smaller of these grew very rapidly indeed.

After 1962, urban growth accelerated and became more concentrated. As table 11 indicates, there was a dramatic rise in the growth rate of Nairobi, small decreases in Mombasa and Kisumu, and larger declines in the smaller towns.

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1 G. E. Johnson and W. E. Whitclaw: Urban-rural income transfers in Kenya: An estimated remittances function (mimeographed study). The lower the income, the higher the proportion of income remitted—declining from over 25 per cent for individuals with incomes of 100 sh. or less a month to about 13 per cent for those with incomes of 175 sh. or more. Data on cash gifts and remittances from urban households in Nairobi, Mombasa and Kisumu are available from the urban household budget survey, 1968-69. These show a less variable pattern of transfer, averaging between 7 and 9 per cent for households in the three cities.
Table 11. Average annual growth of African population in the main towns, 1948-62 and 1962-69 (Percentages)

<table>
<thead>
<tr>
<th>Town</th>
<th>1948-62</th>
<th>1962-69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi</td>
<td>6.5</td>
<td>15.2</td>
</tr>
<tr>
<td>Kisumu</td>
<td>7.2</td>
<td>8.7</td>
</tr>
<tr>
<td>Mombasa</td>
<td>7.1</td>
<td>7.6</td>
</tr>
<tr>
<td>Thika</td>
<td>10.5</td>
<td>5.6</td>
</tr>
<tr>
<td>Nyeri</td>
<td>9.1</td>
<td>5.2</td>
</tr>
<tr>
<td>Nakuru</td>
<td>6.3</td>
<td>4.9</td>
</tr>
<tr>
<td>Nanyuki</td>
<td>8.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Eldoret</td>
<td>7.6</td>
<td>0.4</td>
</tr>
</tbody>
</table>

1 Boundary changes artificially inflated some of these figures, particularly that for Nairobi, which after adjustment for annexations is reduced to about 10.3 per cent, and those for Mombasa and Kisumu, which after adjustment are reduced to about 5 per cent.

Source: Population census, 1969, Vol. II.

That there should be such marked shifts of population towards urban areas is not unexpected. During periods of rapid economic development and the beginnings of industrial growth, most countries have experienced high rural-urban migration; what makes it serious in Kenya, however, are the very rapid rates at which it has occurred when contrasted with available resources and the growth of wage employment in the formal sector.

An inflow of job seekers at roughly three times the rate of growth of job opportunities in the formal sector has inevitably made it very difficult to absorb the migrants into productive employment. The next chapter indicates the extent to which employment in the informal sector has expanded to fill the gap. Nevertheless according to E. Whitelaw’s unpublished 1971 survey of Nairobi households, over 10 per cent of migrants are still seeking work up to three years after their arrival in Nairobi, and much more among more recent arrivals. The percentages of immigrants to Nairobi who were seeking work in 1971 were as follows by year of arrival:

<table>
<thead>
<tr>
<th>Year of arrival</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-71</td>
<td>24</td>
</tr>
<tr>
<td>1969</td>
<td>14</td>
</tr>
<tr>
<td>1968</td>
<td>11</td>
</tr>
<tr>
<td>1966-7</td>
<td>8</td>
</tr>
<tr>
<td>1964-5</td>
<td>2</td>
</tr>
</tbody>
</table>

1 For more precise definitions of unemployment and a discussion of the data from this survey see Chapter 3.
In assessing these figures, two errors in interpretation often arise. The first is to assume that because of the various sacrifices involved the individuals who migrate are necessarily worse off than before. This seems to be the opposite of the truth. Whatever the social costs of this migration, there can be little doubt that to the migrants themselves, it is seen as private gain. In spite of the struggles that many go through to find work or just to survive, for those who succeed it is clearly worth while, and even for those who do not succeed it is usually worth trying.

The second error is to assume that because private migration is individually worth while it must be socially desirable. No doubt some migration and urbanisation is needed. But the particularly rapid rates of recent years have been too high, reinforcing the tendency for the centre to absorb even more resources and increasing urban problems, particularly with regard to employment. The definition and measurement of these problems is the subject of the next chapter.
In the urban areas, the expansion of employment in enumerated activities—government service and private firms covered by annual enumerations of employees—has proved inadequate to provide earning opportunities for the existing urban adult population, much less the annual increase of this adult population resulting from migration. In Mombasa in 1969, for example, enumerated employment amounted to barely one-third of the adult population.

The remainder of the population of working age is not necessarily unemployed. Some are housewives, students, or other persons seeking employment only occasionally or not at all. Moreover, a significant proportion of adults not in enumerated employment are engaged in other activities providing economic goods and services to the urban population: they are members of the informal sector, described earlier in the Introduction, frequently living in squatter settlements devoid of most essential services, such as running water, electricity, health services and schools. Informal economic activity—though often not formally recognised, and in some cases (particularly in Nairobi) restricted and actively discouraged—is often economically efficient, productive and creative. In such activity people practise a variety of modern trades and crafts, just as in the formal sector, but without the formal sector's protection from competition, or its favoured access to credit and sophisticated technology.

In addition to those employed in the formal and informal sectors there are the unemployed—those without sources of current income and seeking work. We have no direct evidence that their numbers have been increasing, but this seems to be the general view. The existence of the urban informal sector, with its sources of low-income employment, prevents one from making any inferences about unemployment from the fact that the rate of adult rural-urban migration

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1 See pp. 5-6.
Employment, incomes and equality

has exceeded the rate of expansion of urban employment in the formal sector. However, we feel it is not necessary to attempt to either substantiate or refute the general view. The essence of the urban employment problem in Kenya lies in a combination of unemployment and low incomes—i.e. the number and conditions of the working poor—and there is little doubt that the working poor, as defined below, are increasing relatively and absolutely in urban areas. In this sense, the urban employment problem has been growing more severe in recent years, and will continue to do so unless drastic steps are taken.

The first step towards a solution of the employment problem in urban areas must be an attempt to estimate the proportions of the population in our three categories—formal-sector employment, informal-sector employment and the unemployed. The first has been enumerated, so that no estimation is needed. By their very nature, estimation of the latter two is very difficult. If, as we believe, the informal sector must play a major role in any strategy to solve the employment problem in Kenya, it is essential to estimate the size of this sector. We therefore attempt in this chapter to build up an account of how the urban population is employed, with estimates of the number of persons in the informal sector and in the residual adult population, including the unemployed. Then, from available survey data, we analyse in detail the composition of the categories of the unemployed and the working poor.

Employment in the formal sector

Table 12 summarises the data on employment in the formal sector in the urban areas—the one subject on which the information available is reasonably reliable and comprehensive. In terms of number of persons, there is somewhat under half as much urban wage employment in the formal sector as there is regular rural wage-earning employment and roughly a third as much as there is total rural wage employment, including casual employment. The proportions of skilled and non-African workers in the urban areas are very much higher.

Within the urban sector, the dominance of Nairobi and Mombasa may be even greater than is often realised. Nairobi and Mombasa together account for 70 per cent of Africans, 89 per cent of Asians and 86 per cent of Europeans in urban wage employment in the formal sector. Earnings in Nairobi and Mombasa account for 83 per cent of the total urban wage bill, 60 per cent of the wages paid in the formal sector throughout the country and probably a third of all personal income in Kenya. Given this disproportionate position of Nairobi and Mombasa in the whole field of jobs and incomes, it is only natural that many people should migrate to these towns, mostly to be absorbed into informal employment or left unemployed.

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1 See pp. 60-61.
Table 12. Urban employment in the formal sector by citizenship, race and sex, and total wage bill, 1969

<table>
<thead>
<tr>
<th>Town</th>
<th>Persons employed (thousands)</th>
<th>Earnings (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>African K</td>
<td>N-K</td>
</tr>
<tr>
<td>Nairobi</td>
<td>132.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Mombasa</td>
<td>51.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Nakuru</td>
<td>13.0</td>
<td>—</td>
</tr>
<tr>
<td>Kisumu</td>
<td>12.1</td>
<td>—</td>
</tr>
<tr>
<td>Eldoret</td>
<td>8.8</td>
<td>0.1</td>
</tr>
<tr>
<td>Thika</td>
<td>5.9</td>
<td>—</td>
</tr>
<tr>
<td>Nyeri</td>
<td>5.1</td>
<td>—</td>
</tr>
<tr>
<td>Other</td>
<td>34.2</td>
<td>—</td>
</tr>
<tr>
<td>All towns</td>
<td>262.3</td>
<td>1.7</td>
</tr>
</tbody>
</table>

K = Kenyan, N-K = Non-Kenyan.


Unemployment, and employment in the informal sector

When we move outside employment in the formal sector, we can only build up a picture from incomplete information and partial clues, town by town. The mission has attempted this for Nairobi, though even in that case there are serious gaps. Nairobi has a predominant position, however, and does itself account for an important part of the urban aggregate. However, similar studies need to be undertaken in other Kenyan towns: in their absence the mission has had to rely on very partial evidence to assess the full extent of unemployment and low incomes in urban areas generally.

In table 13 an attempt is made to account for the African population of working age in Nairobi, the city for which the most reliable information is available. Just over 134,000 African males and females were in wage employment in the formal sector, and about 25,000 were in secondary or higher educational institutions, leaving some 42,000 African males and 58,000 females unaccounted for. How were these people occupied?

In Nairobi in 1969, according to a survey of the Mathare Valley, which is one of the oldest of the illegal squatter settlement areas, over one-third of the African male and female adults lived in such settlements. It is from this survey and by analogy from a survey of rural non-agricultural activities, that in

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1 University of Nairobi, Housing Research and Development Unit: Mathare Valley: A case study of uncontrolled settlement in Nairobi (Nairobi, 1969); Nairobi Urban Study Group: Survey of temporary structures, Preliminary summary of findings (Nairobi, 1971); and Survey of non-agricultural rural enterprises, 1969.
Employment, incomes and equality

Table 13. Estimate of African employment in Nairobi, 1969
(Thousands)

<table>
<thead>
<tr>
<th>Group</th>
<th>Males</th>
<th>Females</th>
<th>Total ¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>African population over 14</td>
<td>179</td>
<td>84</td>
<td>263</td>
</tr>
<tr>
<td>Accounted for:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary-school pupils</td>
<td>17</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>Students</td>
<td>2</td>
<td>—</td>
<td>2</td>
</tr>
<tr>
<td>Wage employment in the formal sector</td>
<td>116</td>
<td>19</td>
<td>134</td>
</tr>
<tr>
<td>Self-employment in the formal sector</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Unaccounted for (informal-sector employment,</td>
<td>42</td>
<td>58</td>
<td>100</td>
</tr>
<tr>
<td>housewives, unemployment and miscellaneous)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Totals may not add up exactly owing to rounding.

Technical Paper 3 we arrive at an estimate of slightly fewer than 32,000 persons employed in the informal sector, about four-fifths of them being presumed to be adult African males. If this estimate is near the correct figure, 20 per cent of the income-earning opportunities in Nairobi in 1969 were provided by the informal sector.¹

We have considerable evidence to indicate that the share is much higher in other cities, where the authorities impose fewer restrictions on the operation of the informal sector. In Mombasa, for example, the informal sector appears to provide as much as 35 per cent of earning opportunities. In general it is in the small towns, such as Malindi or Nanyuki, that the informal sector is relatively most important, providing over 50 per cent of earning opportunities in these two cases.

It is particularly difficult to estimate how many women are employed in the informal sector or unemployed. Many of the women are involved in informal activities which are difficult to cover statistically, for example illegal beer brewing, prostitution and urban agriculture.² Women are often employed part-time in several different activities. Even if we could enumerate all the women engaged in such activities, the remainder would include a large number of women who would not involve themselves in work other than household work, except under dramatically changed social conditions. Accordingly we

¹ A recent World Bank report estimated informal-sector employment in Nairobi at 29,000, of whom 16,000 were self-employed and 13,000 were employed for wages. For the urban areas as a whole, the report estimated informal-sector employment at 100,000, or nearly 25 per cent of the urban African labour force.
² Mathare Valley, op. cit.
Urban employment
cannot presume that all those not employed in the formal or informal sectors are necessarily unemployed.

Some results of an official survey\(^1\) of unemployment in Kenya’s three largest towns in 1968-69 are summarised in table 14.

Household heads, whose loss of employment or failure to gain employment would be more serious than that of other members of their households, have lower unemployment rates, from less than a third to less than a half that of other male household members. Unfortunately, the survey did not disaggregate household heads by sex, and for female members did not distinguish between those who are actively seeking work and those who are not. We have such information for Nairobi only. Before looking at Nairobi in detail, if we assume that the rate of unemployment for male household heads in each town is the same as for males and females combined, and if we weight the number of male household heads by their proportion in each of the three towns, we obtain overall unemployment rates for males of 10.3 per cent for Nairobi, 14.4 per cent for Mombasa, and 8.4 per cent for Kisumu. Weighting by adult male population, the over-all unemployment rate for the three towns combined is 11.4 per cent.

These rates of unemployment for Nairobi are substantiated from two other sources. A survey of squatter settlements in 1969\(^2\) gave unemployment rates of 4.7 per cent for male household heads, 10.5 per cent for female household heads, and 11.8 per cent for male household members. As with the official survey, it is not possible to distinguish unemployed females who are not heads of households because of the indeterminate classification of women who are unemployed or whose work is confined to household duties. These figures are none the less particularly useful, for it is in the squatter areas that we would expect to find the highest rates of unemployment. Yet the data indicate that unemployment rates are only marginally higher (for male household heads) or lower (other male household members) in the squatter areas as compared to the city as a whole.

Applying the concept of unemployment to a poor country is fraught with difficulty. Are the people recorded as seeking work strictly unemployed or are they in some way employed but wanting “a job”? Fortunately we have another survey\(^3\) for Nairobi, which supplies information on those who were seeking employment and who reported that they had no income from work or had worked 0 hours during the previous week (table 15).

\(^1\) These findings have considerable weaknesses; perhaps most important, the sample seems heavily weighted towards formal-sector wage earners in Nairobi. This is not so serious for present purposes; we have independent evidence for Nairobi which indicates similar magnitudes of unemployment. For further comments on the biases in this survey, see Chapter 5.

\(^2\) Mathare Valley, op. cit., and Nairobi Urban Study Group, op. cit.

\(^3\) E. Whitelaw: *Survey of Nairobi households, 1971* (unpublished, subsequently referred to as the “Whitelaw survey”). This was a random survey of over 1,600 Nairobi adults.
Employment, incomes and equality

Table 14. Proportion of household heads and other adult members who are unemployed or (in the case of females) whose work is confined to household duties, in Nairobi, Mombasa and Kisumu, 1968-69 (Percentages)

<table>
<thead>
<tr>
<th>Town</th>
<th>Household heads (males and females)</th>
<th>Other household members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Married</td>
</tr>
<tr>
<td>Nairobi</td>
<td>4.2</td>
<td>15.2</td>
</tr>
<tr>
<td>Mombasa</td>
<td>9.8</td>
<td>20.0</td>
</tr>
<tr>
<td>Kisumu</td>
<td>4.0</td>
<td>11.7</td>
</tr>
</tbody>
</table>


Table 15. Proportion of African household heads and other adult members seeking work and having zero income or working zero hours in the previous week in Nairobi, 1970 (Percentages)

<table>
<thead>
<tr>
<th>Category of unemployed persons</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero income:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household heads</td>
<td>4.9</td>
<td>10.8</td>
</tr>
<tr>
<td>Other members</td>
<td>10.0</td>
<td>22.8</td>
</tr>
<tr>
<td>No hours worked:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household heads</td>
<td>5.3</td>
<td>17.3</td>
</tr>
<tr>
<td>Other members</td>
<td>10.4</td>
<td>27.0</td>
</tr>
</tbody>
</table>

Source: Whitelaw survey.

The agreement with previous data is close: 4.9 per cent of male heads of household were reported as seeking work and having no income and 5.3 per cent were reported as seeking work while working no hours, while in the 1968-69 survey 4.2 per cent of male household heads reported themselves unemployed.

In view of the difficulties that arise in carrying out surveys of unemployment, incomes, and hours worked, it is illusory to ask, in the interests of accuracy, which figure is "correct". A more reasonable approach is to consider the two figures as the probable limits within which the actual rate of unemployment lay for this group during the period 1968-70. Weighting the unemployment rates corresponding to zero income for differences of sex and household status, we arrive at rates of 8 per cent for men and 21 per cent for women, and an overall rate of about 12 per cent. If the male unemployment rate given in official surveys is used, the overall rate for males and females in Nairobi is 13 per cent.
The most striking inferences we draw from these figures is that when the same criteria are used in defining unemployment for men and women, it is clear that women are much harder hit than men. Unemployment rates of 5 to 10 per cent for male household heads and 10 to 15 per cent for non-heads represent a serious human and social problem, but unemployment rates of 10 to 17 per cent for female household heads and 23 to 27 per cent for non-heads are more serious, particularly for the household heads.

Unemployment among youth and those with education

While data are scarce, we can obtain a partial picture of the characteristics of the unemployed in Nairobi and a fragmentary one for Mombasa. Table 16 provides data on job seekers from the 1970 Nairobi survey. This table, which includes all job seekers, whether employed or unemployed, shows that for the two sexes together—though not altogether for women—job seeking is most widespread in the youngest two age groups. (However, the inclusion of the employed introduces a serious distortion, as table 17 indicates.) It should be noted that table 16 shows that until the age of 60 the proportion of women seeking work is greater than that of men for all but the 20–24 age group. This further emphasises the seriousness of the female employment problem.

Once we segregate the unemployed, defined as those with zero incomes and seeking work, the weight of unemployment is clearly seen to fall preponderantly upon the youngest age groups, and, as before, on females much more than males. Unemployment among people under 20 or 25 has somewhat different implications—in some ways less serious and in other ways more—than unemployment among older persons, particularly those with families and dependants. As Chapter 4 suggests, however, the youth unemployment problem can have serious effects even among young people without dependants.

Unemployment among youth in general must be clearly distinguished from unemployment among educated youth. As table 18 shows, male job seeking is spread relatively evenly over the range of schooling achieved. It is not possible to convert table 18 into an unemployment table, but it is possible to show the incidence of job seeking by level of education and age, as is done in table 19. This reveals the important fact that, within age groups, rates of job seeking seem to be consistently lower for persons with more education. (The exceptions shown in the table are all in cells of small sample size.) This is a striking fact and has a major policy implication: unemployment among the educated youth is serious, but measures directed primarily towards youths with primary or secondary education would fail to help even more disadvantaged young people of either sex. The above discussion has been based on data relating to Nairobi, but less detailed data from Mombasa indicate a similar pattern. While unem-
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Table 16. Proportion of Africans in Nairobi seeking work \(^1\), by age and sex, 1970
(Percentages)

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Both sexes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-19</td>
<td>30</td>
<td>39</td>
<td>33</td>
</tr>
<tr>
<td>20-24</td>
<td>31</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>25-29</td>
<td>13</td>
<td>46</td>
<td>16</td>
</tr>
<tr>
<td>30-34</td>
<td>13</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>35-39</td>
<td>11</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>40-44</td>
<td>12</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>45-49</td>
<td>9</td>
<td>50</td>
<td>11</td>
</tr>
<tr>
<td>50-59</td>
<td>11</td>
<td>33</td>
<td>13</td>
</tr>
<tr>
<td>60 and over</td>
<td>12</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>All persons in sample</td>
<td>16</td>
<td>30</td>
<td>17</td>
</tr>
</tbody>
</table>

\(^1\) The denominator of the fraction from which the percentages are calculated for this and the next two tables is the sum for each age or education group of those receiving income plus those with zero income who are seeking work. This is analogous to the usual labour force measure of the employed plus the unemployed. \(^*\) Less than ten in sample.

Source: Whitelaw survey.

Table 17. Proportion of Africans in Nairobi seeking work \(^1\) and reporting zero income, by age and sex, 1970
(Percentages)

<table>
<thead>
<tr>
<th>Age</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-19</td>
<td>46</td>
<td>53</td>
</tr>
<tr>
<td>20-24</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>25-29</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>30-34</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>35-39</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td>40-44</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>45-49</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>50-59</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>60 and over</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>All persons in sample</td>
<td>8</td>
<td>21</td>
</tr>
</tbody>
</table>

\(^1\) See note 1 to table 16. \(^*\) Less than ten in sample.

Source: Whitelaw survey.

Employment falls disproportionately upon the younger members of the labour force, the share of total unemployment in that city accounted for by those with seven or fewer years of education is the same as their proportion of the labour force.\(^1\)

Table 18. Proportion of Africans seeking work in Nairobi, by level of education and sex, 1970
(Percentages)

<table>
<thead>
<tr>
<th>Years of education</th>
<th>Male</th>
<th>Female</th>
<th>Both sexes</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>18</td>
<td>33</td>
<td>21</td>
</tr>
<tr>
<td>1-2</td>
<td>11</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>3-4</td>
<td>16</td>
<td>45</td>
<td>19</td>
</tr>
<tr>
<td>5-6</td>
<td>19</td>
<td>32</td>
<td>21</td>
</tr>
<tr>
<td>7-8</td>
<td>17</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>9-10</td>
<td>13</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>11-12</td>
<td>11</td>
<td>33</td>
<td>13</td>
</tr>
<tr>
<td>13-14</td>
<td>10</td>
<td>50</td>
<td>17</td>
</tr>
<tr>
<td>over 14</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All persons in sample</td>
<td>16</td>
<td>30</td>
<td>17</td>
</tr>
</tbody>
</table>

1 See note 1 to table 16. 2 Sample size very small.
Source: Whitelaw survey.

Table 19. Proportion of Africans seeking work in Nairobi, by age and level of education, 1970
(Percentages)

<table>
<thead>
<tr>
<th>Age</th>
<th>Length of education (in years)</th>
<th>0</th>
<th>1-6</th>
<th>7-8</th>
<th>9+</th>
<th>All lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-19</td>
<td>(43)</td>
<td>(38)</td>
<td>(44)</td>
<td>(11)</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>20-24</td>
<td>(15)</td>
<td>52</td>
<td>33</td>
<td>19</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>25-29</td>
<td>43</td>
<td>28</td>
<td>10</td>
<td>7</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>30-34</td>
<td>36</td>
<td>14</td>
<td>7</td>
<td>(0)</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>35 and over</td>
<td>15</td>
<td>12</td>
<td>6</td>
<td>4</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>All ages</td>
<td>21</td>
<td>19</td>
<td>17</td>
<td>12</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

1 Bracketed figures indicate less than 25 observations in cell. Persons not specifying age or education were excluded.
Source: Whitelaw survey.

Despite the scarcity of data, we may now draw together several clear conclusions about urban unemployment in Kenya. First, for the three towns for which there are data, the rates of unemployment are in the range of 8 to 14 per cent, with a weighted average of 11.5 per cent. Secondly, the incidence of unemployment falls more heavily on women than on men. Thirdly, it is the younger members of the adult population who are hardest hit. Fourthly, within all age groups, including the younger age groups, it is the less educated who suffer most. The worst of all possible circumstances from the point of view of seeking work is to be young, uneducated and female.

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Employment, incomes and equality

The conclusions about educated unemployment emerging from our analysis deserve special emphasis. It is generally held that the unemployment problem in Kenya is worst for the primary-school leaver. In fact we find that while the primary-school leaver represents the largest single educational category (41 per cent) among those seeking jobs within the 16-24 age group, the actual rate of unemployment is worse for those with lower educational qualifications. The young age groups are no exception to the general rule that the rate of unemployment, for any given age group, tends to fall steadily as the level of educational attainment rises.

Income inadequacy

The urban employment problem in Kenya is not limited to unemployment. It would be arbitrary and analytically unsound to consider the situation of the unemployed while ignoring people who are working for excessively low incomes. Inclusion of low incomes as part of the employment problem makes it necessary to specify an income floor. For reasons given below, we take 200 sh. per month in the urban areas in Kenya as this floor, and shall refer to all those earning less than this as the "working poor".

It is necessary to indicate briefly the rationale for choosing this level of income to define the working poor. Admittedly the choice is somewhat subjective and arbitrary. This is inevitable. The test of the validity of the choice is whether the floor level chosen is reasonable—reasonable in the sense of being apparently attainable as a minimum income level within the potential resources available to the country, and reasonable also in the sense of representing a standard of living which would generally be considered (i.e. by most people in the country) to correspond to the minimum standard needed to avoid real poverty and deprivation.

The first test of reasonableness is considered in Chapter 7. As regards the second test, 200 sh. monthly is almost exactly the money wage needed to attain in mid-1972 the purchasing power of the minimum wage for Nairobi and Mombasa when it was fixed at its current level six years ago. In other words, the standard by which in this report we define the urban working poor was itself adopted officially six years ago in fixing the minimum wage. While we would not pretend that the assessment of need used in fixing minimum wages

1 Some slight over-estimation is, however, involved in the tables used later in this chapter to quantify the proportion of the working poor in Nairobi in 1970, since at that time the equivalent value of the 1966 basic minimum wage was not 200 sh. but 185 sh. It was not possible, however, to express the data in relation to that standard, so 200 sh. has been used. It should also be noted that in towns other than Nairobi and Mombasa, the minimum wage is some 12 per cent less than the minimum wage in Nairobi. As mentioned earlier, however, these other towns account for only 30 per cent of total urban wage employment in the formal sector.
Urban employment

is a particularly “objective” view of need or that need is the only consideration involved, it is at least a standard of need legitimised by statute as a minimum standard.

A more difficult problem is to relate individual earnings to household living standards.\(^1\) Clearly families with two wage earners earning 150 sh. each will be better off than families of the same size but with only one wage earner earning 225 sh. It is this which introduces the most uncertain element into estimates of the working poor. Unfortunately, we have data relating total household income to household size but not to the individual earnings of household members. Thus although we know that households with higher incomes are larger and have a higher level of consumption per head, we cannot trace the links precisely enough to measure the effect of low individual earnings on household poverty. These omissions from our measurements must be borne in mind in our subsequent discussions of the working poor.

These uncertainties leave our estimates open to two sorts of reaction, both of which are wrong, in our view. First, there is the reaction of excessive trust, in which the particular income floor used here—and the estimates of the working poor it implies—are uncritically accepted as firm and definitive figures. Such a reaction is clearly unwarranted in view of the lack of data on which to base more objective estimates of the income (and supporting government services) which a family of a specified size would require to provide for minimum nutrition, housing, clothing and other basic necessities.

The alternative reaction—total acceptance of the arbitrary nature of the standard, if not scepticism with regard to its validity—is equally unjustified. Even in data-rich countries, the definition of standards of poverty is never wholly objective but involves large elements of judgement and comparative choice among different views about reasonable standards. The search for a wholly objective standard is illusory, and in any case our conclusions with policy implications would not be greatly altered by moderate variations in the standard chosen.

Table 20 shows the proportions of non-agricultural employees in the formal sector who are earning less than 200 sh. a month in different sectors of the economy. Most but not all of these are employed in urban areas. Except for electricity and water, transport and communications, the proportion of workers earning less than 200 sh. a month in each sector is between a quarter and a third, somewhat more in services. There is, however, considerable variation within the groups of workers earning less than 200 sh. a month. In building and construction most of the working poor—about a sixth of all

\(^1\) Our minimum income targets for the future strategy are determined in terms of household incomes, not individual incomes. Unfortunately, it was not possible to present reliable base year tables in terms of household incomes.
workers in the industry—earn under 100 sh. a month. In commerce and in mining the largest share of the working poor earn between 100 and 150 sh., and in manufacturing, transport and communications between 150 and 200. In services there is a large group earning less than 100 sh. a month and another large group earning between 150 and 200 sh.

The above figures refer only to employment in the formal sector. As with unemployment, estimates including informal-sector employment must be restricted to Nairobi. Table 21 provides a breakdown of all the working poor for Nairobi by household status and sex from the 1970 survey data. The survey reported that the working poor were equally distributed proportionately between heads and other members of households with just under 14 per cent of total wage earners in each category. Females were disproportionately represented; over 30 per cent both of female household heads and of other members of households were part of the working poor. This gives a composite figure of the working poor at 18 per cent of the employed adult African population of Nairobi, convincingly close to the estimate for 1971 of the Urban Study Group.

From the Nairobi data, it does not appear that the working poor work short hours. Only about 15 per cent of the working poor reported working less than 40 hours a week, while almost 30 per cent reported working in excess of 60 hours. The general view that Nairobi’s labour force is made up, in addition to unemployed workers, of a large proportion of people who work irregularly and are involuntarily idle for much of the time is not correct. The working

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1 Whitelaw survey, op. cit.
Table 21. Proportion of employed persons earning less than 200 sh. per month in Nairobi, by sex and household status, 1970 (Percentages)

<table>
<thead>
<tr>
<th>Earnings bracket (sh. per month)</th>
<th>Household heads</th>
<th>All household members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>1-99</td>
<td>13.8</td>
<td>40.7</td>
</tr>
<tr>
<td>100-199</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13.8</td>
<td>40.7</td>
</tr>
</tbody>
</table>

Source: Whitelaw survey.

poor in general work long hours for low incomes. On the average, they work longer hours than persons who earn incomes of over 200 sh. a month. Not surprisingly, the youngest groups of the employed are heavily over-represented in the working poor. However, a major determinant of individual earnings is education¹, so that a young worker with education can look forward to moving out of the class of the working poor quite rapidly. The uneducated, however, generally enter the class of the working poor on first employment and are unlikely to leave it. As with unemployment, one’s chances of staying below 200 sh. are greatest if one is uneducated and female.

The urban employment problem summarised

From the information already given we can summarise the urban employment problem in Nairobi as in table 22. Unfortunately, such a summary is not possible for other cities. By our definition just over 20 per cent of adult males and just over 50 per cent of females working or unemployed are affected by the urban employment problem in Nairobi. These are not unemployment rates, nor are they unemployment equivalents; they measure the proportion of the population lacking the opportunity of earning a reasonable minimum income—a concept more relevant in Kenya than the unemployment rate.

It is not surprising that in a country such as Kenya, with limited resources and a low income per head, the problem of the working poor should constitute the major part of the employment problem.

From the information available, we conclude that the employment problem in urban Kenya is serious and growing.² The fact that unemployment is only a part of this problem, and not even the largest part, in no way diminishes its

² The evidence that the problem is growing is mainly contained in Chapter 6.
Employment, incomes and equality

Table 22. Proportion of unemployed persons and of the working poor in the adult population of Nairobi, by sex and household status, 1970 (Percentages)

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Heads of households</td>
<td>All members of households</td>
</tr>
<tr>
<td>Unemployed 1</td>
<td>4.9</td>
<td>10.0</td>
</tr>
<tr>
<td>Working poor</td>
<td>13.8</td>
<td>13.6</td>
</tr>
<tr>
<td>Unemployed 1 persons and working poor jointly</td>
<td>18.7</td>
<td>23.6</td>
</tr>
</tbody>
</table>

1 Unemployed persons are those with zero incomes who are seeking work.

Source: tables 15 and 21.

Gravity. The problem of the men and women in urban Kenya who are without work is one of appalling intensity and extent; but that problem cannot be solved except within the context of the larger problem, which encompasses their fellow countrymen and women among the working poor.
EMPLOYMENT PROBLEMS AMONG PARTICULAR GROUPS

School leavers

As we have already seen, unemployment and job seeking were less prevalent among school leavers than among other young persons, at least in 1969. Because this fact is so much at variance with many views, it may be useful to investigate the evidence further, not only about unemployment but about how school leavers set about finding work.

Let us begin with pupils leaving secondary school after form 4. Table 23 giving data from the tracer project, shows what secondary-school leavers do and how the position has been changing in recent years. About half of all pupils leaving after form 4 go on to further education or training and, at that stage, do not look for work, except perhaps for the chance of earning a little money during their holidays. Of those who enter the job market, almost all were employed within a year of leaving school—at least until 1968. Thereafter, the position became more difficult, as is hardly surprising in view of the tremendous expansion in enrolments in Harambee as well as government and private schools. Total secondary enrolments (forms 1–4) increased from 46,000 in 1965 to 122,000 in 1970, and the number of pupils leaving after form 4 more than tripled, from under 6,000 in 1965 to almost 13,000 in 1968, 17,000 in 1969 and 19,000 in 1970.

Of the 1968 contingent of pupils who left school after form 4, the proportion in employment a year later was lower than for the 1967 contingent, and the proportion unemployed was 15 per cent as compared with 1 per cent. The situation was repeated with the 1969 contingent, but with markedly fewer in employment and a higher proportion in further education or training. Without

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1 This is an on-going project of the Institute for Development Studies of the University of Nairobi. Some of the data used are from P. K. Kinyanjui: *Education, training and employment of secondary school leavers in Kenya* (mimeographed, 1971).

2 The national self-help movement.
doubt, this marked the end of the halcyon days when a pupil leaving school after form 4, whether with or without a certificate, could almost certainly and rapidly obtain the sort of job he wanted. But did it mark the beginning of widespread unemployment among school leavers?

For three reasons we think not. In the first place, though it became more difficult for secondary-school leavers to find jobs it was not impossible. Surveys of the same school leavers, two or three years after they had left school, showed a marked increase in employment and a sharp reduction of unemployment, as table 24 indicates.

### Table 23. Activities of former secondary-school pupils (form 4) one year after leaving, 1966-70 (Percentages)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Year of leaving school and year of activities recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Further education or training</td>
<td>45</td>
</tr>
<tr>
<td>Employed</td>
<td>40</td>
</tr>
<tr>
<td>Unemployed</td>
<td>2</td>
</tr>
<tr>
<td>Others and untraced 1</td>
<td>13</td>
</tr>
<tr>
<td>All activities 2</td>
<td>100</td>
</tr>
</tbody>
</table>

* Mostly untraced. Totals may not add up exactly owing to rounding.

Source: Tracer project of the Institute for Development Studies of the University of Nairobi.

### Table 24. Activities of former secondary-school pupils (form 4) one year after leaving, and two or three years after leaving, 1968-71 (Percentages)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Year of leaving school and years of activities recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Further education or training</td>
<td>49</td>
</tr>
<tr>
<td>Employed</td>
<td>40</td>
</tr>
<tr>
<td>Unemployed</td>
<td>1</td>
</tr>
<tr>
<td>Others and untraced 1</td>
<td>10</td>
</tr>
<tr>
<td>All activities 2</td>
<td>100</td>
</tr>
</tbody>
</table>

* Mostly untraced. Totals may not add up exactly owing to rounding.

Source: Tracer project of the Institute for Development Studies of the University of Nairobi.
Secondly, the rates of unemployment (or more strictly of job seeking) among pupils leaving secondary school after form 4 were still significantly lower than the rates for other young people or for other persons with less education.\textsuperscript{1} This is true even if one assumes that most of those untraced in table 24 were unemployed.

Thirdly, and more fundamentally, the school leaver problem is not in our view the result of a simple excess of school leavers each year over the number of new jobs requiring school qualifications. True, this excess is large and has been growing very rapidly. But the particular reasons why school leavers are a problem, why they are frustrated and why an increasing proportion of them are seeking work, is not so much that opportunities do not exist but that the opportunities open are not attractive in relation to those obtained by persons with comparable qualifications only a few years ago. In this sense, the school leavers seeking work are evidence not of a shortage of jobs but of a growing imbalance of opportunities. The imbalance is brought home all the more forcefully because the situation has changed so quickly. Most of the school leavers seeking work today were well ahead in their school careers before they or their parents realised that good jobs would soon be so difficult to obtain. Thus, many are disappointed and frustrated, and some cling for a while to hopes of an urban job, using what influence they have to get the best jobs going.

Nevertheless, the school leavers are not fixed in their ideas and aspirations, and there is a good deal of evidence in Kenya and other countries in Africa that they soon adjust to the realities of the changing situation. Many primary-school leavers who only a few years ago constituted the major employment problem now move rapidly into work which a few years ago they would have shunned. It is this which makes it difficult to tell what will happen to today's secondary-school leavers. Will they also move into a new range of jobs, once they size up the new situation? Or have they reached the level of education which, for one reason or another, will make them permanently dissatisfied with anything less than a white-collar job? How much more quickly will they adjust their hopes and aspirations if the imbalance in income differentials and job prospects in different sectors of the economy is reduced?

To understand the school leaver problem, it is important to appreciate the full range of opportunities open in the informal as well as the formal sector of employment, and the different paths toward them, some through formal education and some outside it.

Some children enter primary school in the normal manner and complete it. The great majority of those who stay the course then leave school. The fraction selected for secondary education continue. The school leavers form two

\textsuperscript{1} See Chapter 3, tables 16 to 19.
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groups—those obtaining regular wage-earning employment in the formal sector and those moving into the informal sector. At the end of secondary education this process is repeated. Those completing higher education almost all find regular employment opportunities in the formal sector of the economy.

There are other children whose families want them to enter school in the normal way but who do not do so, or who attend only for a year or two and then drop out. Frequently this is because they lack the money for school fees. For much of their childhood such children gather what knowledge and training they can from parents, elder siblings, and the community around them. A small proportion go to one of the junior youth centres, which are designed to give basic education at reduced fees. Naturally, such children wish to go to school, and a handful do transfer from youth centres to primary schools. But the continuation of their schooling is not certain, mainly because of lack of money for fees, unless they become accepted by the primary-school committee as part of the 5 or 10 per cent of the pupils who are allowed remission of fees.¹

All in all, very few of these transferees remain at school long enough to secure further training and regular wage-earning employment, and the great majority find their way into employment in the informal sector, including farming.

Thirdly, there are children whose families choose that they should not go to school, because they prefer the older established pattern of traditional training which is still prevalent in some rural societies and remains dominant amongst such people as the Masai, Turkana and Boran. However, these traditional patterns of training and livelihood are open to modern influences, and some families whose children have initially taken this route later decide to send them to school; but the majority of these children will spend the rest of their lives in the confines of their home areas and the economic activities of their local communities.

While somewhat over-simplified, the foregoing account identifies the three groups of young people who today tend to enter the locally based, small-scale producing and trading occupations included in the informal sector. They are the school leavers who have completed primary school, the drop-outs and young people unable to secure formal education, and those receiving a largely traditional education. Once they enter the informal sector, members of those three groups will have varying degrees of success according to their individual abilities.

People with secondary education have a larger number of options open to them, and many pupils therefore repeat, particularly at the end of primary school, in a struggle to keep these options open. It is of course true that when

¹ We understand that, more recently, school fees have been abolished in 11 poorer districts.
it comes to informal activities, young people with little or no formal education but with resources such as land or animals or a particular skill—such as charcoal burning—may well use these resources more effectively than many school leavers to earn an income. But given the value attached to educational achievement in society at large and on the labour market in particular, those with little or no formal schooling are put at a distinct disadvantage in trying to obtain much more than subsistence.

In the process of social selection, both the examination system and the initiation system play an important part in defining how a young person seeks his own position in society. It is thus significant that there are a very large number of young people who, no matter which initial route they took, find themselves in informal training or employment, but still strive to obtain the scarcer, better paid, less arduous forms of employment available in the formal sector. It is this very rational perception on the part of young people that appears to be at the centre of the “school leaver problem”.

At a rough estimate about 80 per cent of all young people find themselves looking for a way to subsistence in adult life in the informal area of the economy. The 20 per cent who do not will by and large be those who have successfully completed primary education and been selected for further education and training or directly for wage-earning employment. The 80 per cent will be composed of about 30 per cent who completed primary school, 15 per cent who have received some primary education, and 35 per cent who have received none.

A school leaver problem is increasingly regarded as stemming from the fact that so few find employment in the formal sector and that there is such tremendous pressure exercised by young people to fight their way in. But what in fact do we know about what actually happens to young people who, when they leave school, do not immediately obtain further education or wage-earning work in the formal sector?

On leaving school a young person has two sets of aims which tend to be in conflict with each other. First, there is the immediate aim of everyday subsistence—food, shelter, clothing, etc. Secondly, there is the long-term problem of mapping out a career which will provide security in adult life. For those who quickly obtain wage-earning jobs this tension is soon resolved, but for those remaining without regular work there is the continual problem of balancing one set of needs against the other.

Without a regular source of income a school leaver is almost certainly bound to rely upon his family and thus to take his place in a family network which will provide him with his livelihood and a base from which to look for a way of satisfying his long-term needs. Thus, he will often not be unemployed, but he may be severely frustrated in being unable to obtain the sort of work
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he wants. The family will also make demands upon his time, initiative and energy—for example, to help with planting and weeding, or to assist a family member who is more profitably employed. Those looking for formal opportunities stay at the homes of those who already have formal employment (usually in the towns) utilising any contacts they may have, but at the same time often acting as part-time servants.

Also of importance is the peer group, which helps to provide knowledge about work and possible contacts. In the case of secondary-school leavers the peer group often helps by providing a base in town. The effectiveness of these family and friendship networks varies a good deal between school leavers because of the influence of geographical, economic, and ethnic factors.

Different families differ greatly in their capacity to help their younger members in finding employment. Clearly, the size and cohesiveness of the family and friendship network is important. Beyond this, such factors as the number of contactable members who have employment, who can provide homes in the towns, who are prepared to support relatives, who have contacts or direct influence—in short the effectiveness of family, friends and contacts in acting as employment brokers—are of crucial importance.

We can now attempt to summarise. When discussing the relationship between education and employment, the role and responsibility of education in the employment problem must not be misinterpreted.

The major difficulty is the enormous imbalance in the range of opportunities open—particularly the big differences in incomes and in the career prospects, status and the pleasantness of work in urban white-collar jobs in the formal sector, on the one hand, and the range of other occupations in the informal sector and in the rural areas on the other. Education and training interact with and reinforce these imbalances, particularly in two ways. First, the education and training imparted is of the wrong kind in view of the skill needs of the economy (this is the well known criticism of educational systems on the basis of a quantitative manpower approach). Secondly, the attitudes, aspirations and expectations generated and stimulated by conventional educational systems are more and more out of line with the opportunities the economy can provide (this is the mis-match between job expectations and opportunities, also called the school leaver problem).

It is these interactions between imbalances in education, opportunities and incentives which create the surplus of job seekers, particularly school leavers queuing for highly desired jobs, while existing job opportunities are not being taken up.

1 See Technical Paper No. 23.
Other problem groups

Although the school leaver problem is taken particularly seriously, it would be a mistake to think that school leavers constitute the only problem group. A list of such problem groups could be very long: the handicapped orphaned children, members of broken families, the old without support, the lonely and troubled. Every society has such groups, and every decent society tries to look after them within the means available. In this report, however, we focus on groups whose problems are much more closely related to the pattern of employment. In that narrower sense we can identify six specific groups. They will appear from time to time in the course of our report, and our recommendations will have them in mind, sometimes expressly but usually implicitly. The following is a brief picture of these six groups. The first two include school leavers among others, but the school leavers are by no means the worst hit by employment problems, even in these groups.

(1) Young migrants who come to town carrying the high hopes of their parents and families but who find the doors barred to the kind of job they and their relatives expect as a reward for so much effort and so many sacrifices. Hitherto this group has typically consisted of primary-school leavers, but the aspirations of the secondary-school leavers (and their parents) are now more and more frustrated also. This frustration is especially dangerous and wasteful, and so is the under-utilisation of the labour of the young people at a time at which they should be learning by doing. Only from the point of view of loss of immediate income could it perhaps be said that their case is less serious than that of household heads or other older people with greater responsibilities.

(2) Young non-migrants, who will find, even when they stay in the country, that the opportunities open to them are often not in accordance with what they desire.

(3) The landless, or those with not enough land to live on, who do not have the luck of being linked to urban family members who send remittances. For part of this group (concentrated perhaps in some regions where land pressure is greatest 1) it is perhaps less a case of frustrated aspirations but of all hope gone —of dead aspirations, especially among the middle-aged and older persons.

(4) Migrant families forced out by demographic pressure on the land into areas exposed to a permanent risk of drought and of crop failure. Such people are not only insecure themselves, but are in turn pressing on the pastoralists and increasing the precariousness of the latter’s survival in the drier parts of Kitui, Meru, Embu, Machakos and other districts. For migrant agriculturists

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1 For example Central Province, Western Province and Machakos.
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income is uncertain as well as low; labour is certainly under-utilised, and hopes are frustrated when the rains fail; in addition, moreover, they have removed themselves from the traditional network of mutual support by settling in new areas.

(5) The pastoralists who feel the pressure of the group just described are only one example of rural families not participating in the market economy. There are others, as in Narok or parts of South Nyanza, who are in danger because their traditional way of life is increasingly undermined by the inevitable changes and pressures from inside and outside their traditional society. Perhaps the real problem is that in the years ahead many of the children of this group will undoubtedly want to participate more fully in the life of the nation, but are not being adequately prepared for such a future.

(6) Women left in charge of a farm are often strained by the manifold claims on their time and energies. Their husbands may be away in town, but many rural women are under strain even with husbands by their side. Here there is no underutilised labour—rather the contrary—and perhaps no time even for aspirations or feelings of frustration. Excessive claims press upon their time and very limited (and often insufficiently aided) capacities—leading to low incomes. And there is the ever-present risk of the calamity which may make it no longer possible to cope.

The numbers involved

We cannot add up these groups in precise numbers. There may also be an element of overlapping in the families where members must be counted among one or the other of the groups. But we have very little doubt that here we have numbers so large that if in different societies they were expressed in terms of an unemployment rate they would be treated as a national problem of the first order of seriousness.
In the preceding chapters we have given a quantitative and qualitative picture of unemployment and poverty in the rural and urban areas of Kenya. In this chapter we pull together the various elements in order to give a more comprehensive picture of two subjects which are fundamental to most of the problems with which this report is concerned, namely the structure of income distribution in Kenya and regional disparities in the availability of essential services.

The structure of income distribution

There are several ways of looking at income distribution, each relevant for certain policy issues. We place the emphasis here on personal and household incomes, though other aspects of income distribution such as between urban and rural areas and among different regions are also briefly mentioned. ¹

Perhaps the most illuminating way of summarising the whole picture of income distribution in Kenya is by certain categories of economic groups, as is done in table 25.

The categories distinguished in table 25 are not, of course, mutually exclusive: smallholders may take up jobs in urban or rural areas, and leave the management of farms to their wives or relatives; persons deriving part of their income from shares in industry or from urban property may also be holding

¹ A comprehensive analysis of income distribution in Kenya is unfortunately precluded by lack of adequate data. There are parts of the population, especially wage earners in the formal sector, for whom the existing data yield a reasonably complete and accurate picture of income distribution, but for other parts only fragmentary data of limited reliability are available. Nevertheless, we have attempted on the basis of the existing information, supplemented by additional research, to build up a rough picture of income distribution in Kenya. For more detailed information on income distribution, as well as details of computation, see Technical Paper 4. Information on income distribution among major ethnic groups is given in Chapter 6.
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Table 25. Household income distribution by economic group and income size, 1968-70

<table>
<thead>
<tr>
<th>Economic group</th>
<th>Annual income (£)</th>
<th>Number of households ¹ (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owners of medium-sized to large non-agricultural enterprises in the formal sector of commerce, industry and services; rentiers; big farmers; self-employed professional people; holders of high-level jobs in the formal sector.</td>
<td>1 000 and over</td>
<td>30</td>
</tr>
<tr>
<td>Intermediate-level employees in the formal sector; owners of medium-sized non-agricultural enterprises in the formal sector; less prosperous big farmers.</td>
<td>600-1 000</td>
<td>50</td>
</tr>
<tr>
<td>Semi-skilled employees in the formal sector; prosperous smallholders; better-off owners of non-agricultural rural enterprises; a small proportion of owners of enterprises in the formal sector.</td>
<td>200-600</td>
<td>220</td>
</tr>
<tr>
<td>Unskilled employees in the formal non-agricultural sector; significant proportion of smallholders; most of the owners of non-agricultural rural enterprises.</td>
<td>120-200</td>
<td>240</td>
</tr>
<tr>
<td>Employees in formal-sector agriculture; a small proportion of unskilled employees in the formal sector; better-off wage earners and self-employed persons in the informal urban sector; a small proportion of owners of non-agricultural rural enterprises.</td>
<td>60-120</td>
<td>330</td>
</tr>
<tr>
<td>Workers employed on small holdings and in rural non-agricultural enterprises; a significant proportion of employed and self-employed persons in the informal urban sector; sizeable number of smallholders.</td>
<td>20-60</td>
<td>1 140</td>
</tr>
<tr>
<td>Smallholders; pastoralists in semi-arid and arid zones; unemployed and landless persons in both rural and urban areas.</td>
<td>20 and less</td>
<td>330</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2 340</td>
</tr>
</tbody>
</table>

¹ Very approximate.


high-level jobs, and so on. Nevertheless, it seems useful to analyse income distribution in terms of these categories.

The table shows a spectrum of income levels, which range from £20 or less per year at the bottom for a significant number of smallholders, pastoralists, and unemployed and landless people in both rural and urban areas, all the way to a small group of persons at the top of the scale with incomes above £1,000 a year, who comprise owners of large and medium-sized non-agricultural enterprises, big farmers, rentiers, independent professional people and holders
Table 26. Urban household income distribution before and after tax, 1968-69

<table>
<thead>
<tr>
<th>Income bracket (sh. per month before tax)</th>
<th>Households</th>
<th>Share of total urban household income (percentages)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute number (thousands)</td>
<td>Percentages</td>
</tr>
<tr>
<td>0-199</td>
<td>16.3</td>
<td>8.5</td>
</tr>
<tr>
<td>200-299</td>
<td>31.9</td>
<td>16.6</td>
</tr>
<tr>
<td>300-399</td>
<td>25.5</td>
<td>13.3</td>
</tr>
<tr>
<td>400-499</td>
<td>17.4</td>
<td>9.1</td>
</tr>
<tr>
<td>500-699</td>
<td>26.0</td>
<td>13.5</td>
</tr>
<tr>
<td>700-999</td>
<td>19.0</td>
<td>9.9</td>
</tr>
<tr>
<td>1000-1 399</td>
<td>18.9</td>
<td>9.9</td>
</tr>
<tr>
<td>1 400-1 999</td>
<td>17.8</td>
<td>9.3</td>
</tr>
<tr>
<td>2 000 and over</td>
<td>19.1</td>
<td>9.9</td>
</tr>
<tr>
<td>Total 1</td>
<td>191.8</td>
<td>100</td>
</tr>
</tbody>
</table>

1 Totals may not add up exactly owing to rounding.

of high-level jobs in the formal sector. Persons with incomes between £200 and £600 may be labelled the middle-income groups: this group would include a significant proportion of the employees in the non-agricultural formal sector, a sizeable number of smallholders, and a small proportion of owners of small, non-agricultural enterprises—the informal sector—in both rural and urban areas.

Finally, there is the low-income group, the households in which are in a state of real poverty. Most of the households in the country fall into this low-income group, which includes all unskilled employees in the formal agricultural sector, all employees on small holdings and in the rural and urban non-agricultural enterprises of the informal sector, the lowest-paid one-fourth of employees in the urban formal sector, most of the self-employed in the urban informal sector, and the majority of smallholders and pastoralists in semi-arid and arid zones. The identification of this group is of central importance, for the entire strategy proposed by the mission is directed towards improving incomes and employment opportunities for households with incomes below £120 a year.

For urban households, data are available for Nairobi, Mombasa, and Kisumu based on the urban household expenditure survey. But there was serious bias in the sample, and the results shown in table 26 must therefore be treated as representing rough orders of magnitude rather than precise estimates. The major biases arose through omitting most of the urban shanty areas from the sample frame and through excluding European and Asian households from the
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sample, thereby also excluding many African household servants, many of whom earn less than 200 sh. a month. Thus table 26 understates both the proportion of the urban population earning less than 200 sh. and the proportion earning more than 1,000 sh., if one were to take account of Asians and Europeans. ¹

The table reveals an extremely high degree of income concentration among households. The top 10 and 20 per cent of households account for 35 and 55 per cent of the total urban household income respectively, while the bottom 25 per cent receive a mere 6 per cent. Correcting for the biases in the sample would almost certainly reduce the share received by the bottom 25 per cent even further. Income tax does little to alter this picture. It marginally reduces the share of those earning more than 2,000 sh. a month, but has no measurable effect on the share of those earning under 300 sh.

It is not possible to compute a similar table for distribution of income among rural households, but the evidence and data presented in Chapter 1 on rural employment indicate that concentration of income in the rural areas is likely to be nearly as great, if not greater.

It is useful at this point to say a few words about income inequalities between rural and urban areas, which have been discussed so extensively in the context of employment problems in Kenya, and especially that of urban unemployment. The picture presented in this and the two preceding chapters shows clearly that it is highly misleading to talk in terms of average rural and urban incomes. In both urban and rural areas there is a high degree of income inequality. Owners of large farms, a sizeable number of better-off farmers (some 225,000), many owners of non-agricultural enterprises as well as the highly skilled agricultural employees in the formal sector and the majority of rural non-agricultural employees in the formal sector can be described as relatively well off, i.e. with incomes in excess of £200 a year. On the other hand, nearly 25 per cent of urban employees in the formal sector, and the majority of urban employees and self-employed persons in the informal sector, must be counted among the working poor. Nevertheless, it remains true that in terms of absolute numbers, the great majority of the poor people in Kenya are to be found in the rural areas.

In order to focus more sharply on incomes of the poverty groups in the urban and rural areas, we have assembled the relevant data in table 27. Apart

¹ The extent of undercounting is indicated by comparing the results in table 26 with those obtained from the annual enumeration of employees. According to the latter, the proportion of employees in the formal sector (excluding agriculture and mining) earning less than 200 sh. was 17 per cent in Nairobi, 17.6 per cent in Mombasa and 33.9 per cent in Kisumu, compared with 6.5 per cent, 14.7 per cent and 8.9 per cent respectively according to the urban household budget survey. The figures presented in table 22, on p. 64, based on a different survey, are comparable with those of the annual enumeration of employees, particularly when one considers that the latter exclude workers in the informal sector, most of whom have incomes below 200 sh. a month.
Inequality and imbalance

Table 27. Average incomes of selected groups in rural and urban areas, 1969
(£ per annum)

<table>
<thead>
<tr>
<th></th>
<th>Adults</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rural</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large farms</td>
<td>68</td>
<td>73</td>
<td>46</td>
</tr>
<tr>
<td>Small farms</td>
<td>38</td>
<td>41</td>
<td>34</td>
</tr>
<tr>
<td>Non-agricultural enterprises</td>
<td>45</td>
<td>47</td>
<td>34</td>
</tr>
<tr>
<td>Self-employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smallholders</td>
<td>113</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Owners of non-agricultural enterprises</td>
<td>130</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td><strong>Urban</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal sector, Nairobi</td>
<td>443</td>
<td>471</td>
<td>297</td>
</tr>
<tr>
<td>Statutory minimum wage in the formal sector, Nairobi</td>
<td>...</td>
<td>106</td>
<td>84</td>
</tr>
<tr>
<td>Informal urban</td>
<td>40</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Self-employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informal urban</td>
<td>60</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

... = Not available.

1 There are often wide variations in earnings around the averages shown. This applies particularly to smallholders.


from its intrinsic interest, this information is of central importance for rural-urban migration and hence for urban unemployment and poverty.

In comparing the earnings of poor people, the relevant groups are, in the rural areas, employees on small and large farms, in small, non-agricultural enterprises, and smallholders; and in the urban areas, low-income employees in the formal sector, and employees and self-employed persons in the informal sector.

Table 27 shows that statutory minimum wages in urban areas are well above the incomes of all groups in the rural areas except for the more prosperous smallholder and the average owner of a non-agricultural rural enterprise. Secondly, the earnings of the self-employed in the informal sector in urban areas are well above those of all wage employees in the rural sector except those of employees on the large farms, to which they are comparable. The lowest income groups are rural employees in the informal sector (small holdings and non-agricultural enterprises) and urban employees in the informal sector. Although the average income of smallholders is £113, the dispersion around the average, as has already been shown, is enormous. Thus about
Table 28. Selected indicators of regional disparities in income and essential services, 1969-70

<table>
<thead>
<tr>
<th>Province and district</th>
<th>Population (thousands)</th>
<th>Population per km²</th>
<th>Km. of road per 1,000 km²</th>
<th>Ranking in terms of educational expenditure</th>
<th>Percentage of population in primary school</th>
<th>Area under cash crops as percentage of cultivated area</th>
<th>Percentage of high-potential agricultural land</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coast</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilifi</td>
<td>302</td>
<td>24</td>
<td>56.7</td>
<td>19</td>
<td>7.6</td>
<td>66</td>
<td>8.4</td>
</tr>
<tr>
<td>Kwale</td>
<td>206</td>
<td>25</td>
<td>60.7</td>
<td>21</td>
<td>7.1</td>
<td>42</td>
<td>15.3</td>
</tr>
<tr>
<td>Lamu</td>
<td>22</td>
<td>4</td>
<td>22.2</td>
<td>32</td>
<td>4.6</td>
<td>—</td>
<td>1.1</td>
</tr>
<tr>
<td>Mombasa</td>
<td>247</td>
<td>—</td>
<td>200.5</td>
<td>n.a.</td>
<td>10.6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Taita</td>
<td>111</td>
<td>6</td>
<td>22.5</td>
<td>20</td>
<td>16.7</td>
<td>66</td>
<td>2.5</td>
</tr>
<tr>
<td>Tana River</td>
<td>51</td>
<td>1</td>
<td>14.1</td>
<td>25</td>
<td>7.7</td>
<td>—</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>North-Eastern</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garissa</td>
<td>64</td>
<td>1</td>
<td>11.8</td>
<td>31</td>
<td>2.5</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Mandera</td>
<td>95</td>
<td>4</td>
<td>10.6</td>
<td>33</td>
<td>1.5</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Wajir</td>
<td>86</td>
<td>2</td>
<td>17.9</td>
<td>29</td>
<td>1.5</td>
<td>—</td>
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<td>Province</td>
<td>Code</td>
<td>Population</td>
<td>Area (sq km)</td>
<td>Population Density (p/km²)</td>
<td>Rainfall (in)</td>
<td>Maximum Flood Magnitude</td>
<td>Inundation Area (in)</td>
</tr>
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<td>Western</td>
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<td></td>
<td></td>
<td></td>
</tr>
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<td>Bungoma</td>
<td>345</td>
<td>113</td>
<td>138.0</td>
<td>12</td>
<td>16.8</td>
<td>13</td>
<td>82.1</td>
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<td>200</td>
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<td>196.9</td>
<td>16</td>
<td>13.9</td>
<td>20</td>
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<td>Kakamega</td>
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<td>220</td>
<td>176.1</td>
<td>2</td>
<td>12.4</td>
<td>13</td>
<td>92.3</td>
</tr>
</tbody>
</table>

n.a. = not applicable, — = magnitude negligible.

Source: Statistical abstract, 1970, tables 13, 71, 72, 139, 140 and 158.
640,000 smallholders earning about £40 a year must also be included in the lowest income groups. There are inevitable difficulties in making comparisons among the poorest groups in rural and urban areas, and several qualifications should be borne in mind. In the first place, the incomes of smallholders are probably under-estimated because of under-estimation of the subsistence component. On the other hand, their incomes are subject to very considerable annual fluctuations. Secondly, the incomes of smallholders represent not just their individual earnings but the return on the labour of all their family plus, in addition, the return on the land, the livestock and whatever basic capital are used. Thirdly, many employees, on both large and small farms, are able to supplement their incomes by growing food on their small individual plots, or shambas. Fourthly, the cost of living, not to mention the differences in styles of living and pattern and intensity of work, varies a good deal between urban and rural areas. In particular, the cost of housing and food, which absorb a large proportion of the incomes of poor people, is a good deal higher in urban areas.

When allowance is made for all these factors, it becomes extremely difficult to make any precise comparisons between income levels and living standards among the poorer sections of the rural and urban population. Even the continuing migration into urban areas and the difficulty of finding workers for some of the large farms in rural areas is not conclusive, since migration may simply reflect the hopes and desires of migrants to secure relatively highly paid jobs in the formal sector, in urban areas. Probably at the lowest levels of income, urban incomes in the informal sector are not much above those that can be earned in rural areas.

Moreover, inequality in living standards involves much more than inequality in money incomes. Access to education and health facilities and water, security of tenure (whether under statute law or by custom), fair opportunities for one’s children, protection against arbitrary interference and corrupt practices—all these are, along with incomes, essential for reasonable living. They are also often vital for providing the environment in which individuals can make the best use of their own talents and resources to better themselves. It seems clear that inequalities in incomes are often compounded by inequalities in the distribution of such facilities and opportunities, although we have only limited evidence on how they are distributed.

Regional disparities of government services

There are enormous regional disparities. The preponderant share of urban areas, and especially of Nairobi within the urban areas, in formal-sector activity is brought out in the next chapter. A high proportion of national
output and income is generated in a few districts located in the Central, Coast, Rift Valley, Nyanza and Western Provinces. Other districts in these provinces, as well as most of the Eastern and North-East Provinces, have a disproportionately small share in total economic activity. One indication of regional disparities of income is given in table 28.

The disparities in the level of economic development by regions are further intensified by differences in the provision of public social and economic services. Data given here and later in Chapter 18 show that the percentage of the total population in primary schools varies widely between provinces and districts. Even greater disparities are found in the provision of secondary schools. Wide differences also exist in the availability of other services such as water and electricity supply, roads and health services.

The problems raised for a national employment strategy by regional disparities are manifold and will appear in subsequent chapters of this report, especially Chapters 10, 18 and 19. The following chapter makes clear that regional disparities along with other inequalities and imbalances had much to do with the emergence of the problem into national consciousness and its perception by the Government and people of Kenya.
THE EMERGENCE OF THE PROBLEM

Since the attainment of national independence, the economy in Kenya has grown at a rapid rate—much faster than in most of the developing countries in Africa and elsewhere. Kenya's growth has been notably strong in agriculture, particularly in the small-scale sector, as well as in industry and services. Yet unemployment and gross inequality continue, and in some respects may even have increased. How has this come about?

The colonial origins

To understand the causes we must refer briefly to the earlier history of colonial rule, and to the lines along which the economy developed, particularly under the influence of the interests of the colonial Government and the European settlers. Undoubtedly this was a period of economic growth, but it was also a period of growth in inequality of incomes, in restrictive legislation, in imbalance in the whole pattern of land ownership and in the concentration of economic activity in Nairobi and Mombasa. With few exceptions, the Europeans occupied the top of the income scale, the Asian the middle, and the Africans the bottom.

The basic mechanism of growth during this period was a simple one. Extensive farming by European settlers generated incomes for themselves, exports and foreign exchange for the country, tax revenue for the Government and, in turn, a level and pattern of demand for goods and services somewhat above the average of the middle class in Europe. Part of this income was channelled to Asian traders and skilled craftsmen and part to the African farm workers whose labour supported the whole operation.

\[1\] A special mission paper entitled Government's perception (past and present) of the nature and causes of employment problems and measures to deal with them has been prepared and submitted to the Government separately.
Employment, incomes and equality

As in any economy dependent on export earnings, there were fluctuations in the rate of growth, notably a peak just after the First World War and a trough during the Great Depression. The Second World War brought some forced industrialisation, particularly in food manufacturing, and at the end of that war there was a strong recovery lasting into the late 1950s and attracting further European immigrants, including some ex-servicemen, as farmers sponsored by the Government of the United Kingdom. But for all their economic and political importance, the number of Europeans was still small: under 30,000 in 1948, compared with an Asian population of about 100,000 and an African population of about 5 million, over 160 times more numerous than the European. Nairobi's population at that time was about 100,000, scarcely 2 per cent of Kenya's total.

Yet the incomes and interests of this tiny European minority dominated development economically as well as politically. In certain respects this economic dominance was maintained by legislation, in particular the laws preventing Asians from owning land and Africans from growing cash crops (both with only minor exceptions). In other respects, the dominance of the Europeans followed naturally from their privileged access to secondary and higher education (including special training facilities such as Egerton Agricultural College), and from the way marketing facilities, roads and rail services developed to serve their interests.

Until the early 1950s, the enlargement of the European community and of government services increased Nairobi's importance as the main urban centre, and added to it a circle of supporting industries and services, with growing employment of Asians and Africans. This was true not only of Nairobi's position within Kenya, but of its central position within East Africa, helped by the railway, by the common tariff and by the connections which Kenya's Europeans enjoyed in other parts of the British Commonwealth. It was natural that Nairobi should emerge as the industrial centre of East Africa.

The emergency of the 1950s was probably the first event which seriously shook the confidence of the settlers and the colonial Government and raised questions about the practical feasibility of continued expansion on the earlier pattern. The political importance of the Mau Mau movement for African independence in Kenya and elsewhere is well known, but with time one is apt to forget its economic significance. A major catalyst for the uprising was sharp and growing economic inequality—in particular the blatant contrast between the growing pressure on African land and the large land holdings of the Europeans.

In reaction to Mau Mau, some important changes were made in economic policy, initiated by the Swynnerton plan for African agriculture and the report
Emergence of the problem

of the East Africa Royal Commission on the whole economy.¹ The European monopoly of cash crops was ended. The Swynnerton plan, which was adopted, provided for registration and consolidation of small African holdings together with a programme of credit, loans and concentrated extension services to promote a balanced programme of crop rotation including cash crops.

Important though these changes were, the underlying philosophy concerning economic development was largely unchanged. This was that growth, whether for Europeans or for Africans, could be sustained only by relying on skills, capital and enterprise imported from abroad. Several years thus had to pass before any major crash programme for training Africans for independence was started.

Severe unemployment and extensive job seeking did not emerge until later. In the mid-50s, there was, if anything, a shortage of labour, at least in the urban areas. This was the result of the growth of wage-earning employment (5.3 per cent a year from 1953 to 1957)² and, on the other hand, of a forced reduction in the urban labour force, caused by the restrictions prohibiting the employment of Kikuyu, Embu or Meru.

With the relaxation of these restrictions at the end of the 1950s, a flood of job seekers was released; and at the same time the growth of wage-earning employment in the formal sector turned into a decline: employment in the formal sector fell by 3½ per cent from 1957 to 1958, slowly crept back to regain its 1957 level in 1960, and than fell off again for three years. Meanwhile the population was growing by about 3½ per cent a year.

In 1960 the Government commissioned a survey of unemployment³ which analysed the employment problem in terms of how low living standards and pressure on land in the rural areas contrasted with the opportunities and incomes in the towns. It was an unassuming and somewhat neglected report, which nevertheless foreshadowed elements of later interpretations, including our own.

But the 1960–63 Development Programme gave little explicit attention to employment problems, concentrating on “higher production, higher incomes and increased consumption”, but with little concern for their distribution. By now, the prospect of independence was clear, and aspirations were rising very rapidly, perhaps uncontrollably. Opportunities for those with education suddenly became widely available just when employment in the formal sector

² Part of this increase may be the result of improved coverage in the statistics on employment.
began to fall rapidly, by 5 per cent a year from 1960 to 1963. Thus at the very
time when the number of jobs at the bottom of the ladder in the formal sector
was declining, the ladder was in effect lengthening, and the range of effective
differentials to which a Kenyan might reasonably aspire thus became very
much greater; but because of the difficulty of finding a job, the realisation of
these aspirations became even more narrowly channelled through the educa-
tional system, as providing both the means to get a footing on the ladder and
the qualifications needed to get to the top.

The position just before independence

By 1960, inequality was deeply embedded within the economy. Less than
4,000 European farmers still owned some 3 million hectares of the best land—
four-fifths of the total area of the country with reasonable and reliable rainfall.
They still dominated production, though African production of cash crops
was now moving ahead fast, particularly in areas where consolidation and
registration of land holdings had taken place. There were important differences
in the rate of this development in the different parts of the country, but they
were still relatively small in comparison with the differences between African
and European incomes.

In the urban areas, enormous inequalities prevailed, associated with the
differential access to jobs and facilities typified by the wage and salary structure.
Formal discrimination in salary scales had been abolished, but recruitment on
the basis of education and experience, combined with the limited number of
Kenians with higher levels of education and training, in effect maintained the
sharp salary differentials. In 1961, as table 29 shows, the average earnings
of the 22,000 Europeans in wage-earning employment were over £1,350,
compared with those of the 38,000 Asians (just over £500) and the 530,000
Africans (about £75). The inequalities were enormous but the sense of imme-
diate injustice aroused by their obvious racial dimensions may have obscured
their deeper implications for the long run.

The structure of the economy had, in fact, already been moulded by these
inequalities in several ways. First, the inequality in incomes had led to a pattern
of demand which in turn had established a structure of supply to meet it.
The supply of goods from local production and from imports was sharply
divided between supplies to meet the high-income luxury market and those for
the low-income market—primarily basic goods for Africans and some Asians.
As table 29 indicates, in 1961 the wage bill for the 22,000 Europeans—less
than 4 per cent of total employment—accounted for a third of total wages.
High-income expenditures thus represented a significant share of the total market.
Emergence of the problem

Table 29. Number of enumerated 1 employees, average earnings and total wage bill by racial groups, 1961 and 1970

<table>
<thead>
<tr>
<th>Items</th>
<th>Africans</th>
<th>Asians</th>
<th>Europeans</th>
<th>All races *</th>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of persons employed (thousands)</td>
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<td>38</td>
<td>22</td>
<td>590</td>
</tr>
<tr>
<td>Average earnings (£)</td>
<td>76</td>
<td>511</td>
<td>1 365</td>
<td>152</td>
</tr>
<tr>
<td>Total wage bill (£ million)</td>
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<td>19</td>
<td>30</td>
<td>90</td>
</tr>
<tr>
<td>1970:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of persons employed (thousands)</td>
<td>601</td>
<td>30</td>
<td>14</td>
<td>645</td>
</tr>
<tr>
<td>Average earnings (£)</td>
<td>182</td>
<td>960</td>
<td>2 207</td>
<td>261</td>
</tr>
<tr>
<td>Total wage bill (£ million)</td>
<td>110</td>
<td>29</td>
<td>30</td>
<td>169</td>
</tr>
</tbody>
</table>

1 In 1970 some self-employment was included, but little, if any, in the informal sector.  * Totals may not add up exactly owing to rounding.


A second effect of inequality was on standards. The development of the main towns in particular was heavily influenced by the Europeans, so that building standards and the control of urban development were regulated primarily in the interests of expatriates.

Thirdly, overseas firms, particularly those of the colonial Power, had a natural advantage whether in importing or in local production. Many of these advantages were no more than those of knowing the ropes and having easy communication with the colonial Government or the Asian community; others were based on more explicit concessions by the colonial Government in favour of its national interests.

Fourthly—and this was perhaps the most serious point of all—Kenyan attitudes and aspirations had perhaps been moulded more than was realised by the style and ethos of the divided economy, by the colonial experience of having to accommodate oneself and to work within the existing structure of the economy rather than to change it. Thus, when national independence was achieved the political aim of taking over the economy became merged almost imperceptibly with individual aspirations to take over the jobs, positions and life styles which the economy made possible.

It is important to emphasise that a large part of small-scale production within Kenya was in the hands of Asians who, receiving lower incomes, provided a wide range of skilled services in addition to the bulk of the retail and a large part of the wholesale trade throughout the country. Far from being protected, most Asian trade and industry was generally competitive, and
largely unregulated except in certain rural areas. By providing cheap and efficient services the Asians played a vital role in the economy at large.

Thus Kenya at the coming of independence inherited a very unequal economy already structured on lines which could efficiently sustain very different levels and styles of living for a tiny minority on the one hand and a very large majority on the other. The divisions were incomparably greater than in most countries of Asia or Latin America. It is arguable how much more extreme they were in Kenya than in other African countries at the same stage of political development, but in some respects they were almost certainly greater, because of the effects of the settler community in pre-empting the best land and the influence of their incomes on the structure of imports and production and because of the existence of the Asian community to provide a cheap source of skills and thus limit the need for extensive training of Africans.

Since independence—growth and Kenyanisation

On the achievement of independence, the immediate problem appeared to be the need to take over the economy, not to change it. Politically the country was independent, but large sections of the civil service, as of the private sector, were still controlled by expatriates. As in other African countries, there was an urgent and inescapable need to devise policies to accelerate Africanisation. Unemployment and obvious racial inequality simply intensified the pressures for Kenyanisation as being another way to expand wage-earning opportunities for citizens.

The need to expand and Kenyanise the economy was clearly stated in a ses-sional paper of 1965\(^1\) though the main elements in the strategy had been worked out several years earlier. This document summarises Kenya’s objectives as follows:

1. Political equality.
2. Social justice.
3. Human dignity, including freedom of conscience.
4. Freedom from want, disease and exploitation.
5. Equal opportunities.
6. High and growing per capita incomes, equitably distributed.

A range of policies was outlined to achieve these objectives. Subject to not compromising the first three objectives, “the most important of these policies is to provide a firm basis for rapid economic growth”. Growth was to be the first concern of planning in Kenya since “the only permanent solution to Kenya’s problems rests on rapid growth”. \(^2\)

\(^1\) *African Socialism and its application to planning in Kenya*, op. cit.
\(^2\) Idem, p. 18.
Emergence of the problem

Table 30. Gross domestic product by industrial origin, 1964 and 1970

<table>
<thead>
<tr>
<th>Item</th>
<th>£ million at 1964 prices</th>
<th>Average annual growth, 1964-70 (percentages)</th>
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<tr>
<td></td>
<td>1964</td>
<td>1970</td>
</tr>
<tr>
<td>Outside monetary economy</td>
<td>89</td>
<td>113</td>
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<tr>
<td>Monetary economy</td>
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<td>372</td>
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<tr>
<td>Agriculture, forestry and fishing</td>
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<td>73</td>
</tr>
<tr>
<td>Mining and quarrying</td>
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<td>3</td>
</tr>
<tr>
<td>Manufacturing and repair</td>
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<td>Building and construction</td>
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<tr>
<td>Transport and communications</td>
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<td>42</td>
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<td>Wholesale and retail trade</td>
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<td>Banking and finance</td>
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<td>18</td>
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<tr>
<td>Government services</td>
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<td>Other</td>
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</tr>
<tr>
<td>Total</td>
<td>328&lt;sup&gt;1&lt;/sup&gt;</td>
<td>485</td>
</tr>
</tbody>
</table>

<sup>1</sup> The total does not add up exactly owing to rounding.


Table 31. Percentage of Africans in the total number of employees in the formal sector, excluding large farms, 1959-69

<table>
<thead>
<tr>
<th></th>
<th>1959</th>
<th>1964</th>
<th>1969</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private sector</td>
<td>80</td>
<td>81</td>
<td>85</td>
</tr>
<tr>
<td>Public sector</td>
<td>87</td>
<td>92</td>
<td>95</td>
</tr>
</tbody>
</table>


Next to growth, the dominant short-run problem was Africanisation. Racial imbalances inherited from the past would need to be corrected, subject to providing equal treatment for all citizens. A number of policies ranging from education and training to schemes to promote co-operatives and share ownership were outlined.

In terms of growth and Africanisation the results achieved over the subsequent years were remarkably successful. The rate of economic growth is estimated to have averaged $6\frac{1}{2}$ per cent in real terms from 1964 to 1970, and overall income per head is thought to have increased by an estimated $3\frac{1}{2}$ per cent a year, or by over a quarter in those six years. However uncertain such estimates must be, there can be no doubt about the dynamism of economic expansion in major sections of the economy (see table 30). As compared with that of many less developed countries, the growth of the Kenyan economy has been very impressive.
This achievement was not, however, without cost. The shortage of skills among citizens meant continued reliance on a large number of expatriates and increasing numbers of technical assistance experts. The expansion of industry was stimulated by heavy dependence on foreign capital and expertise. This often involved over-generous concessions. Undoubtedly much of the import substitution has been useful, but some has simply replaced the import of consumer goods with the import of the capital and intermediate goods needed to produce them; and in general the rapid growth of the economy has brought a rapid growth in imports, foreshadowing later problems.

After independence rapid progress was also made towards the second dominant objective, Kenyanisation of the economy. As table 30 indicates, a measure of Africanisation in the public sector had already been achieved before independence. In the private sector the main changes took place after 1964, stimulated by the pressure of government policy and the response of many firms whose management realised that the best way to protect their overall interests was by active implementation of government “localisation” policy. However, this happened mainly in the larger foreign firms. For the smaller enterprises, mainly Asian, pressure to Africanise raised more fundamental challenges and the Government moved to more active policies.

Various measures were used, the two main ones being loan and credit programmes and trade licensing. The loan and credit programmes started in the 1950s were intensified and expanded, particularly in trade, road transport, construction and parts of manufacturing—all areas where operations on a small scale could be started with limited amounts of capital. Loans and credit were backed up by various training and extension programmes.

In order to force the pace, the Government in 1968 used its various powers to provide a protected market for progressive African entrepreneurs. The Trade Licensing Act of 1968 excluded non-citizens from trading in rural areas and in certain parts of the main towns, and from handling certain goods. In other areas trade licences were progressively withdrawn from non-citizens. Similar measures were developed for construction, industry and transport. By mid-1971, 1,068 businesses formerly owned by non-citizens had been transferred to citizens.¹

Comprehensive data on the present number of African non-agricultural enterprises are not available. A recent estimate ² suggests the following:

750 non-agricultural companies;
6,000 other non-farming firms or partnerships;
60,000 unregistered very small enterprises, including most of the licensed traders as well as all the unlicensed ones.

¹ See Chapter 12.
In agriculture, Africanisation largely meant transfer to African use of the farms previously owned by Europeans. Within the first five years of independence, about one-third of the area of the former large European farms had been transferred to African use. As table 32 shows, about 45 per cent of this was subdivided for various types of settlement, providing land for some 46,000 families. Slightly less remained in individual ownership, but for Africans rather than Europeans. The remainder was kept in the form of large farms, but managed co-operatively or by the Department of Settlement.

The effects on job opportunities

Growth and Africanisation certainly increased the number of wage-earning opportunities in the formal sector after independence, but less than had been hoped. The sharp decline of 1960–63 was halted, and a slow but steady rise in formal-sector employment began, continuing throughout the rest of the 1960s. The reversal was made more dramatic in 1964 by the first tripartite agreement under which the unions agreed to a wage-freeze for one year ¹, while private employers agreed to expand employment by 10 per cent and the Government by 15 per cent. Within two weeks of the agreement 205,000 workers had registered for jobs, and 34,000 obtained them. Total formal-sector employment rose by less than this number, partly because many of the new recruits were in fact used to fill posts becoming vacant in the normal course of events. The effect was thus primarily to bring forward recruitment which would in any case have been undertaken within a year or so.²

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¹ The agreement was extended for a further three months in 1965.
² Further details are given in Technical Paper 26.

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Table 32. Land transferred to African use up to 1968

<table>
<thead>
<tr>
<th>Type of use</th>
<th>Total area transferred (thousands of acres)</th>
<th>Number of farms established</th>
<th>Average size of farms established (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subdivisional settlements</td>
<td>1,062</td>
<td>45,900</td>
<td>23</td>
</tr>
<tr>
<td>High-density schemes</td>
<td>788</td>
<td>26,700</td>
<td>30</td>
</tr>
<tr>
<td>Low-density schemes</td>
<td>188</td>
<td>5,200</td>
<td>36</td>
</tr>
<tr>
<td>Squatter settlements</td>
<td>86</td>
<td>14,000</td>
<td>6</td>
</tr>
<tr>
<td>Large farms</td>
<td>1,245</td>
<td>1,226</td>
<td>1,015</td>
</tr>
<tr>
<td>Individually owned</td>
<td>954</td>
<td>1,192</td>
<td>800</td>
</tr>
<tr>
<td>Operated by co-operative societies or the Department of Settlement</td>
<td>291</td>
<td>34</td>
<td>8,560</td>
</tr>
<tr>
<td>All types</td>
<td>2,307</td>
<td>47,126</td>
<td>49</td>
</tr>
</tbody>
</table>

1 Estimated. 2 Approximate.
In agriculture, employment continued to decline until 1967, largely because of the effects of transfers of the land of large farms. On farms which were subdivided the decline was the result of substituting family for wage labour, and thus was really the substitution of one form of employment and income for another. On the large farms remaining in individual ownership, the reduction in employment corresponded to a genuine reduction in wage labour inputs per acre, though the statistics may understate the amount of non-wage labour used and thus the numbers receiving incomes from the farm. On the whole, there is little doubt that income-earning opportunities on the transferred farms have increased considerably since 1964.

In the formal sector outside agriculture the expansion in output did little to increase private employment: in spite of an annual increase of about 8 per cent in total output, the number of additional wage-earning jobs in the formal sector increased by less than 2 per cent a year from 1964 to 1970. Nor, as table 33 shows, did Kenyanisation lead to a direct increase of more than a few thousand in the number of jobs for Africans in the private sector.1

It was therefore left to the public sector to make the largest increases in wage-earning employment in the formal sector. Between 1964 and 1970 wage-earning employment in the public sector increased by over one-third. In comparison with the total of new jobs in the public sector, the direct growth of employment for Africans from Kenyanisation was small (though its wider economic and political significance was, of course, considerable).

As table 34 makes clear, however, the total number of job openings becoming available each year was considerably greater than the net increase in total employment in the formal sector.2 The effect of labour turnover—the opening of job opportunities by the departure of the existing job holders—is very significant.3

In 1970, therefore, there were something of the order of 200,000 job opportunities open each year in the formal sector. At least two-thirds of them were in the rural areas, mainly in agriculture, and the remainder in the urban areas,

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1 The direct increases in African employment due to Kenyanisation include only the increases in African employment to fill posts previously held by non-Africans. Kenyanisation in addition had various effects on total employment, some positive and some negative, but it has not been possible to quantify them.

2 The total number of job openings is a gross figure, obviously far exceeding the net increase in employment. Many—though not all—of those leaving jobs will remain in the labour force and seek work again.

3 Accurate data on labour turnover are not available. But estimates from a survey conducted by the Ministry of Labour on behalf of the mission suggest that in the twelve months until February 1972 it was as high as 66 per cent of agricultural employment, and 14 per cent of private non-agricultural employment, in the formal sector. The same survey suggests that the rate of turnover has been decreasing, at least outside agriculture, though the major reductions probably took place in the 1950s. The results of the survey are contained in a special mission paper entitled Labour turnover and overtime working in Kenya, which has been submitted to the Government separately.
Emergence of the problem

Table 33. Net increase in the number of Africans in wage-earning employment in the formal sector, 1964-70 (Thousands)

<table>
<thead>
<tr>
<th>Source</th>
<th>Agriculture</th>
<th>Private industry and commerce</th>
<th>Public service</th>
<th>Whole sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth of total employment</td>
<td>-18.4</td>
<td>+21.5</td>
<td>+66.0</td>
<td>+69.1</td>
</tr>
<tr>
<td>Africanisation</td>
<td>+0.2</td>
<td>+6.2</td>
<td>+2.5</td>
<td>+8.9</td>
</tr>
<tr>
<td>All sources</td>
<td>-18.2</td>
<td>+27.7</td>
<td>+68.5</td>
<td>+78.0</td>
</tr>
</tbody>
</table>


Table 34. Estimated number of wage job openings becoming available in the formal sector, June 1969-June 1970¹ (Thousands)

<table>
<thead>
<tr>
<th>Source</th>
<th>Agriculture</th>
<th>Private industry and commerce</th>
<th>Public service</th>
<th>Whole sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth of employment</td>
<td>5.0</td>
<td>1.9</td>
<td>10.4</td>
<td>17.4</td>
</tr>
<tr>
<td>Africanisation</td>
<td>0.2</td>
<td>0.8</td>
<td>0.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Estimated vacancies arising from turnover (12 months)</td>
<td>121.0</td>
<td>30.0</td>
<td>n.a.</td>
<td>(151.0 +)</td>
</tr>
<tr>
<td>All sources</td>
<td>126.0</td>
<td>33.0</td>
<td>(10.8 +)</td>
<td>(170.0 +)</td>
</tr>
</tbody>
</table>

n.a. = Not available.

¹ Private sector and agriculture estimates are based on 1972 data.


divided between the public and the private sector.¹ Unfortunately it is not clear how many of these jobs were taken by persons previously employed in formal-sector wage employment and what proportion was therefore open to others—to new migrants, to those previously employed in the informal sector or to the unemployed.²

Nevertheless, there is no doubt that the number of urban job openings in the formal sector was insufficient to match the growing numbers seeking wage-earning jobs. The African population in the main towns was increasing at the rate of over 10 per cent a year, yet total urban employment in the formal sector

¹ The exact proportion depending upon the rate of turnover in the public sector, on which we do not have data.
² From the survey it seems that three-quarters of the persons leaving jobs were between the ages of 25 and 44, which suggests that a proportion of them, at least, were retiring from the formal sector.
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was rising at the rate of less than 1½ per cent. The result was considerable growth in informal-sector employment. Until about 1960, the urban informal sector was comparatively small by the standards of other African countries because of the shortage of labour in Kenya and the restrictions on informal-sector activities, particularly in Nairobi. But with rapid migration after independence, growth in the informal sector accelerated, though as far as we can judge more in numbers employed than in output. Limited resources and continuing restrictions on activities inhibited the expansion of output at the same time as the family base of most informal-sector operations enabled, or perhaps more accurately compelled, the informal sector to continue to absorb labour, even if at low incomes. The result was a process of rapid “involutionary” growth, in which the number of people in the sector increased faster than incomes, adding to the numbers of the working poor, if not to unemployment.

Far from diminishing the demand for education, the increasing imbalance between job seekers on the one hand and well paid jobs in the formal sector and opportunities of earning low incomes in the informal sector on the other has merely intensified it. Education was the primary qualification for access to wage-earning jobs, at least in the first few years after the attainment of national independence. This led to a tremendous drive for the expansion of education as young people and parents did all in their power to obtain the education needed to obtain the jobs. The Government’s own programme of secondary school expansion, itself exceeding the earlier estimates of long-run manpower requirements, was overtaken by the wave of Harambee secondary schools built by communities throughout the country. Inevitably the richer communities were able to do more and thus the availability of secondary-school education became even more unequal than before independence. With pressure on Government to take over these schools, inequality of access was institutionalised.

From the point of view of long-term employment objectives, the most damaging aspect of these events may be the effects of undifferentiated quantitative expansion on the educational system itself. As in the economy, basic structural changes were required in the educational system inherited from the colonial

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1 Some additional posts were of course becoming available through Kenyanisation, but the positive effect of this on the growth of employment opportunities was probably more or less offset by the negative effects of the gradual decline in turnover rates.

2 Growth that turns in on itself. The informal sector has the potential of absorbing labour even if incomes do not rise, because of family ownership of enterprises. If the growth of output in the sector is inhibited, the result is to spread a slowly growing income over a rapidly growing population—see Clifford Geertz: *Agricultural involution: The processes of ecological change in Indonesia*, Association of Asian Studies Monographs and Papers, No. XI (Berkeley and Los Angeles, University of California Press, third printing, 1968).

3 See Chapter 13 and Technical Paper 22.
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period. Yet the pressure of sheer expansion left little time for qualitative change, except on the periphery of the formal educational system. Impressive efforts were indeed made to counteract these tendencies, particularly in the village polytechnics, with the new teaching materials and in some of the training programmes. But quantitatively they were insignificant by comparison with the changes in the formal, academic system, the expansion of which was supported by students, parents, and politicians alike and which absorbed an ever increasing share of government expenditure, and no doubt of private expenditure as well. Thus, money and resources were channelled into tremendous quantitative expansion of a system still largely cast within a colonial mould. Fundamental changes of structure, curriculum, examinations and, indeed, the whole style and approach of the educational system were postponed. In a sense the growth of the system and the Kenyanisation of enrolments had prevented the educational structure from being adapted to national needs and made more equitable.

The increasing imbalance between job seekers and well paid jobs led to the introduction of a second tripartite agreement. On that occasion the Government and employers agreed to expand employment by 10 per cent of their regular establishment. Employees agreed to a 12 months’ wage standstill, and there were to be no strikes or lockouts during the agreement. According to Ministry of Labour information, 45,680 jobs were provided under this scheme, some 30,000 in the private sector and 15,500 in the public sector. This was a substantial increase in the rate of growth of permanent job opportunities, particularly in the private sector. But once again, most of those recruited under the agreement were later used to fill posts made vacant through turnover. Thus the second tripartite agreement, like the first, undoubtedly increased employment, but the direct effects had largely worked themselves out by the end of 1971.

Effects on inequality and employment problems

Already it will be clear that the emphasis on growth and Africanisation has benefited some groups of the population more than others. From the point of view of employment strategy the extent to which some groups have gained by comparison with others is important, since the imbalances created are closely correlated with the drive for jobs and access to land. Moreover, in assessing the progress towards the objective of equitable income distribution and the relief of poverty, the progress of the poorest sections of the population is of particular importance.

Unfortunately, it is not possible to measure the trends in income distribution over the past decade in Kenya comprehensively or in a way that excludes misinterpretation. Comprehensive measurement is ruled out because of lack of data. A simple approach might be misleading because of the complexity of the
issues. Thus one needs to distinguish income distribution among the whole population in Kenya from distribution among Kenyan citizens or among Africans. One must also specify how inequality is being measured—the range from top to bottom, the relative size of the gaps between specified groups or one of the more technical measures (e.g. Gini coefficients based on Lorenz curves). Finally, one would like, if possible, to have data on a wide range of components of living standards, including government services, and not only on the distribution of income.

In this brief summary, we have the space to make only selective and tentative comments, those of direct relevance to employment problems. In terms of over-all distribution, it is virtually impossible to assess how income distribution among the whole population has changed since independence though there is certainly no marked evidence of any sharp reductions in inequality. But among Africans, it seems that the spread between the top and the bottom and the share of incomes received by the top percentiles has increased, in large part as a direct consequence of Kenyans taking over jobs and land formally held by expatriates. At lower income levels, a number of policies such as land resettlement and the Kenyanisation of jobs and businesses have had the effect of altering income distribution in favour of the erstwhile low-income groups and away from the high-income non-African minorities. While racial inequalities of income and wealth distribution have thus almost certainly diminished over the past decade, the over-all personal distribution of income does not seem to have moved to any substantial degree in an egalitarian direction.

It is, however, possible to identify broad groups of persons who have benefited substantially from the rapid growth of the economy since independence. There is first of all the small group of Kenyans who have filled the high-level jobs previously held by expatriates. Secondly, a much bigger group of persons have benefited from the transfer of land from European farmers to African settlers. Thirdly, new opportunities have arisen for Kenyan traders, builders, transporters, and small-scale manufacturing, repair and service firms. Finally, there is the relatively large group of employees in the modern, urban sector who have been able to secure increases of 6-8 per cent a year in their real incomes since independence.

The group of persons who have failed to derive much benefit from the growth generated since independence includes the great majority of small-holders, employees in the rural sector, the urban working poor, and the urban and rural unemployed. Many, it is true, have benefited from an expansion of education, health and other government-financed services, but in the rural

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1 Hybrid maize is almost certainly the most significant innovation for raising the living standards of the poorer farmers. Yet a survey in Central Province in 1970 showed that only 31 per cent of farmers were growing hybrid, few of the poorest among them.
areas at least, such gains have been offset to some extent by the rise in the price of urban goods by comparison with what a farmer gets from selling agricultural produce (the rural-urban terms of trade declined by at least 13 per cent from 1964 to 1970). ¹

Among smallholders, a minority have been able to increase their incomes rapidly in resettlement areas and elsewhere, assisted by access to credit, extension services, and training of various sorts provided by the Government. On the other hand, the great majority of smallholders continue to have very low incomes owing to the poor quality and small size of their holdings, the subsistence nature of their farming and the employment of traditional techniques of production. They have so far been largely by-passed by the various government programmes to raise agricultural productivity by such means as rural roads, credit schemes, land registration, extension services, and training.

Unless there is a major change in development strategy and policies, and in the absence of effective and powerful redistributive mechanisms, the heavy concentration of income is likely to continue and may be further intensified in the future. A high degree of income inequality is a characteristic feature of private enterprise economies in an early stage of development. Further, these inequalities tend to be intensified with the growth of the economy over long periods of time. There are reasons to believe that such dynamic factors tending to perpetuate and intensify inequalities may be operative in the Kenyan social and economic system.

Access to education and to scarce productive assets such as land, capital and credit is increasingly the chief vehicles to high incomes and affluence in Kenya. It seems likely that groups of persons who already possess these advantages will be further able to consolidate their economic power and affluence. Possession of a higher education, of a high income and of the influential positions that go with it ensures not only that these persons will have preferential access to scarce productive factors but also that they will be able to transmit the benefits of high-quality education to their children. What is now merely the beginnings of stratification by education and incomes could very easily within a further generation become a rigid and institutionalised barrier. Likewise, the possession of land, built-up urban property and other capital assets is increasingly facilitating the further acquisition of these factors through preferential access to credit, licences of various sorts, lucrative contracts from the public sector, agencies, and patronage appointments to public and private bodies. Conversely, the poor and the less educated may find it difficult to break out of the circle of poverty. Poor education results in a denial of job opportunities.

¹ Calculation based on an index of agricultural prices divided by a modified urban price index (to represent consumers' prices of farmers). Use of the ordinary urban price index would indicate a more rapid decline in the terms of trade.
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Lack of productive assets and of influential contacts further reduces the chances of earning reasonable incomes. Since the poor tend to have large families and to lack means of securing good education for their children, the heritage of poverty will be handed down to the next generation.

At the same time, as argued later in the report, the growth of the economy along existing lines is unlikely to broaden the base of income-earning opportunities for the majority of the people. Thus a class of poor and disadvantaged persons, already prominent on the Kenyan social scene, may over time be enlarged and suffer further relative impoverishment, in the absence of a strong and coherent strategy for rapid economic growth accompanied by a more egalitarian distribution of the benefits of growth.

The implications of the foreign exchange constraint

Whatever the other pressures, the change in the balance of payments is now beginning to set limits on the earlier pattern of growth. This is in marked contrast to the 1960s, when Kenya seemed to have solved the problem of reconciling economic growth with a strong balance of payments. Admittedly, even then the traditional surplus of imports over exports continued, accompanied by a persistent outflow of dividends and interest. These were more or less balanced, however, in the early years of that decade, by receipts for transport services (due to Nairobi's pivotal position in the transport system of East Africa) and also from tourism. This balance was apparently not jeopardised by the boom that followed independence. After an upsurge in 1964-66, imports levelled off, so that it did not seem to matter greatly that exports were also rather stagnant. Private capital poured into Kenya and exchange reserves mounted.

The first signs that this situation was precarious appeared in 1970, when imports rose sharply (see table 35). But this caused no great concern at the time. Exports also rose, owing to a sudden rise in the price of coffee, and so did aid inflows; so reserves continued to climb. But imports rose again in 1971, reaching a level about 50 per cent above that of 1969. Although import prices had risen substantially owing to inflation in the industrial countries, this increase was mostly one of volume, a delayed response to the rising expenditures, private and public, of previous years. Meanwhile the rise in exports petered out and the inflows of capital decreased. Foreign exchange reserves sank, and at the end of 1971 their level, £63 million, was more than £20 million below what they had been at the end of the previous year.

1 One must bear in mind that changes in import prices may also reflect in some degree differences from one year to another in the extent to which invoices for imports are padded to provide a means of exporting capital.
Table 34. Balance of payments, 1964, 1966 and 1969-71 ¹
(£millions)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exports</td>
<td>77</td>
<td>87</td>
<td>89</td>
<td>99</td>
<td>100</td>
</tr>
<tr>
<td>— Imports</td>
<td>-87</td>
<td>-114</td>
<td>-121</td>
<td>-150</td>
<td>-180</td>
</tr>
<tr>
<td>Merchandise balance</td>
<td>-9</td>
<td>-27</td>
<td>-32</td>
<td>-50</td>
<td>-80</td>
</tr>
<tr>
<td>Balance of services ²</td>
<td>27</td>
<td>20</td>
<td>28</td>
<td>36</td>
<td>39</td>
</tr>
<tr>
<td>Balance on current account</td>
<td>18</td>
<td>-7</td>
<td>-3</td>
<td>-14</td>
<td>-41</td>
</tr>
<tr>
<td>Net foreign private investment</td>
<td>-15</td>
<td>1</td>
<td>13</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Net government borrowing (long-term) ³</td>
<td>-1</td>
<td>14</td>
<td>10</td>
<td>18</td>
<td>10</td>
</tr>
<tr>
<td>Net additions to liquid asset ⁴</td>
<td>2</td>
<td>8</td>
<td>19</td>
<td>18</td>
<td>-26</td>
</tr>
</tbody>
</table>

¹ Items may not add up to totals exactly because of rounding. ² Preliminary estimate. ³ Including transfers and net factor incomes. ⁴ Reduced by an outflow of £7 million for share purchases from the private sector. ⁵ Includes borrowing by public enterprises. ⁶ Also includes the "errors and omissions" item in the balance of payments estimates. Source: Statistical abstract, 1970 and 1971, and mission's estimates.

The Government has already started to take a series of measures to stop the loss of foreign exchange. It has imposed limits on commercial credit and higher taxes on motor vehicles, supplemented by an effective devaluation of the Kenyan currency at the end of 1971 (by pegging it to the United States dollar) and an instruction to banks early in 1972 not to supply foreign exchange for the purchase of goods which could be bought in Kenya. These measures might well reverse the rise in imports, perhaps with some delay, and might do so—because of the high levels of investment in both fixed capital and inventories—without causing acute scarcities. But the point is that the myth of effortless growth, a Kenyan “miracle”, had been shattered. It has suddenly become clear that the boom had been of a kind that caused stresses in the balance of payments, just as it had been the sort of boom that aggravated unemployment and inequality. Problems are no longer perceived in the same way. Aid and private investment, which had generally been welcome as a means of increasing investment and stimulating growth, are now insufficient to fill the gap, and questions are being asked about the total consequences of such inflows of capital, not only for the balance of payments but also for the country’s social and economic structure.

The need for a basic change in priorities

Kenya’s strategy of growth and Africanisation since independence has thus in its own terms been remarkably successful in many respects—more
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successful than this brief account can convey. But as we have seen, it has intensified rather than relieved a number of difficulties inherited from the colonial era. Many of these difficulties are variations of different forms of imbalance and inequality—between town and country, different regions, large and small landholders, those with education and those without. And the pressure of job seekers, whether school leavers or not, is largely, though not entirely, a symptom of these deeper imbalances.

Kenya's economic aims documented in Sessional Paper No. 10 and often restated since, rightly lay strong emphasis on the priority to be attached to balancing growth and other economic objectives with the need to ensure that the fruits of growth are equitably distributed, and to make rapid headway in the abolition of poverty and disease.

In spite of a range of important policies directed towards these objectives, Kenya has been robbed of her full achievement. Growth and Kenyanisation have been secured, but inequality and employment problems remain.

In analysing why this has occurred, one is led to ask what is the underlying mechanism of growth and how this has changed, if at all, since independence. We have come to the conclusion that in many respects economic growth has largely continued on lines set by the earlier colonial structure. Posts have been Africanised and there has been great expansion; but the structures which led to and have sustained inequality still remain: the centre still grows at the expense of the periphery and important parts of the economy are still controlled by expatriate interests.

Kenyanisation has radically changed the racial composition of the group of people in charge at the centre and many of its policies, but has brought about only limited change in the mechanisms which maintain its dominance—the pattern of government income and expenditure, the freedom of foreign firms to establish themselves in Nairobi, and the luxury of expenditure by a small high-income group superimposed on a base of mass consumption.

These elements are the most obvious but they are not the only elements in the broader system which grew under the pattern of colonial relationships. The system reflected the balance of power and interest of the time which enabled the small European elite—and to a much lesser extent the Asian community—to secure a disproportionate share of the country's income and wealth. More serious in its long-term consequences is the fact that this highly unequal pattern of income distribution led to a pattern of expenditure which in turn meant that the pattern of imports and domestic production, of government expenditure and revenue, of housing and the provision of education, health and other social services, became structured to sustain the very inequalities which created them.

Indeed, the power of the centre over the periphery may well today be
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greater than before, since there is now a closer correlation of interests between
the urban elite, the owners of large farms and the larger, expatriate companies.
Previously, these groups were all headed by non-Africans, mostly Europeans.
Though they had a close identity of interest and views, and a way of life and
contacts which made it easy to exchange information, there were some respects
in which their interests differed: the farmer-settlers' interests were more local
than those of the civil servants who lived in Kenya for a shorter time and
whose loyalties were with London, and both of these interests groups differed
in their views from the management of the larger companies, whether expatriate
or local. Politicians sometimes played a role in all three circles before indepen-
dence, though they were fewer in number and weaker.

All these circles are now more closely linked, and coalitions of interests
are accordingly closer. Moreover, such coalitions of interests were, before
independence at least, conspicuous, and racially vulnerable to nationalist
challenges. Kenyanisation has significantly reduced this risk. Moreover,
within the circle, the influence of foreign companies appears to be growing
rapidly, certainly within the manufacturing sector but to some extent also in
other parts of the economy. This seems to be partly the result of the earlier
decision in Kenyanisation policy to rely on foreign European finance instead of
on local Asian finance (which in turn has had important repercussions on the
scale and technology of production).

Nairobi's position is even more dominant than before. From 1962 to 1969,
there was a dramatic rise in Nairobi's rate of population growth (even allowing
for boundary changes), slight increases in Mombasa and Kisumu and declines
in other towns. In terms of output and employment Nairobi, with 5 per cent
of the nation's population, now generates more than half of national output in
manufacturing, electricity and commerce, two-fifths in transport and services
and two-thirds in construction. With half the urban population of the country,
it accounts for two-thirds of the urban wage bill.

The crucial question is where is this leading? Our mission is not the first
group to see parallels with Latin American experience, in which inequality
becomes deeply locked into the structure of the country and only the most
drastic remedies can change the situation.

Opinions naturally differ over how far this process has gone in Kenya, and
there are undoubtedly important offsetting features. The structure of income
inequality inherited by Kenyans is still modified a good deal by transfers
within the extended family; the differences in incomes and life styles between the
elite and the rest of the population have not yet become firmly set along class
lines, though with the educational system unchanged and continuing recruit-
ment for top jobs and incomes based on educational qualifications, this could
well happen within the next generation. Many Kenyan directors of foreign
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firms are still sensitive to national interests and not just to their personal prospects within the international firms. Corruption, though of increasing concern\(^1\), is still limited to a minority, and many civil servants set standards of loyalty and integrity of which the country is justly proud.

But the crucial question is not exactly how far this has gone but where it is leading and what ought to be done. Here we are clearer, for we see dangerous tendencies in the situation which need to be reversed by a major revision of priorities in the 1970s. The abolition of poverty and major reductions in inequality need much greater emphasis. Growth and economic expansion require relatively less emphasis—less, at least, as judged by earlier indicators. What will be needed is a qualitative emphasis on the areas and types of economic expansion which will bring a rapid improvement in the living standards of the poorest quarter of the country's population, particularly in the rural but also in the urban areas. The strategy outlined later is designed to attain this end, with minimum income targets for all sections of the population, rural and urban, to be reached by 1978 and 1985.

\(^1\) As may be seen, for example, from Report of the Select Committee on Unemployment, op. cit., paragraph 39 (c).
REPORT

PART II

AN EMPLOYMENT-ORIENTED STRATEGY
OBJECTIVES AND OVER-ALL STRATEGY

All of the previous analysis adds up to the need for a major change in strategy, with much more emphasis being given to the expansion of productive employment, the abolition of poverty, the reduction of extreme inequalities and the more equitable distribution of the fruits of growth.

Although this would mean important changes in policy, it would imply a strengthening of measures for the attainment of basic national objectives, rather than major changes in the objectives themselves. These objectives as laid down in Sessional Paper No. 10 of 1965 have already been quoted in Chapter 6 and need not be repeated here. For the purposes of an employment-oriented strategy, they can be restated as follows:

1. Continued expansion of the economy.
2. A wider sharing of the benefits of expansion, especially among those groups of the population which lack the opportunity of earning an acceptable minimum income.
3. The national integration of the economy.
4. An attack on extreme imbalances and disparities between regions, social groups and individuals.

These objectives also underlie our own recommendations.

In elaborating measures to achieve these objectives, we have worked within the framework of a mixed economy, assuming the continuation of private ownership and initiative in some parts of the economy and public ownership and initiative in others. We also assume that the Government will continue to pursue its policy of monitoring and influencing the private sector to ensure that the use of resources is in the general interests of the nation and fits within the specific economic objectives which the Government has laid down.

1 See page 88.
Our detailed policy proposals will carry us into matters such as famine relief, company taxation, building regulations, agricultural extension and tariffs, which have not been conventionally perceived as essential subjects for an employment policy. Before entering into such detail, it may be appropriate to describe our over-all strategy and the way in which it is based upon the principles and major objectives just mentioned. This procedure will also help to explain how the policies proposed for the various sectors of the economy and in relation to such matters as technology and education are derived from a common over-all conception. This discussion of over-all strategy will further show the complementarity or inter-relatedness of these objectives. Indeed, they are all necessary for a self-reinforcing and consistent strategy as the basis of a national employment policy.

Continued expansion of the economy

In spite of rapid and sustained expansion since it achieved independence, Kenya is still a poor country. The present income per head is still uncomfortably close to the standard we would like to set for a reasonable minimum of income-earning power in 1985, i.e. about 180 sh. a month for the average rural household and 250 sh. for the average urban household (at present prices). However, if expansion can continue at the present rate of around 7 per cent each year throughout the seventies, such a minimum standard would come well within reach. The demonstrated growth capacity of the economy is a precious asset, and remains vital for a full employment policy.

The Kenyan economy has demonstrated in the past that it is capable of rates of expansion of the order of 7 per cent per annum, which is well above the general experience of developing countries. A continuation of this rate of expansion is essential for our strategy for a number of reasons.

In the first place, we repeat that Kenya, in spite of rapid progress, is still a poor country, not only in relation to the rich industrialised countries, but even in comparison with many developing countries.

Secondly, we have related the unemployment problem to the problem of poverty, and our policy must accordingly be directed towards raising the incomes of the poorest groups of the population—the working poor, who make up perhaps 25 per cent of the urban population and 40 per cent of the rural population. This must be done in the face of a rapid population increase. An over-all growth of 7 per cent means growth amounting to only 3½ per cent per head; if the growth rate were reduced, say to 6 per cent, the effect on the growth of real incomes per head would be disproportionately severe—a fall from 3½ per cent to 2½ per cent—significantly delaying the attainment of the minimum income targets.
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Thirdly, as explained in Chapter 10, our policies to deal with rural employment imply a rapid growth—something like a 6 per cent growth according to our rough calculations—in agricultural output. The rural population will continue to increase at the rate of 2.7-2.8 per cent yearly, even if the African urban population continues to grow at the rate of 8 per cent. Even a 6 per cent rate of growth of agricultural production, therefore, represents a growth of only a little over 3 per cent per head. This seems the minimum required for our policies to work, and to provide the required domestic part of the market for the expanded output.

An increase in agricultural output of 6 per cent per annum, in turn, is attainable only with a higher rate of increase in the urban and industrial sectors of the economy, because of the nature of the inter-relations between agriculture and the rest of the economy and because of the structural changes which are necessary and inevitable in a developing country such as Kenya. With the urban population growing by 8 per cent or so a year, any lower rate of growth of urban-based output would mean less productivity per person. Thus we cannot consistently assume less than 8-9 per cent growth in the non-agricultural parts of the Kenyan economy—which in turn suggests a rate of growth of not less than 7 per cent over-all.

Fourthly, and as will be shown shortly, the higher the rate of growth the more readily will the changes in income distribution which are essential to our strategy be achieved. With a higher rate, the necessary shift in income distribution can be brought about within an acceptable period by redistribution from growth, within the framework of a mixed economy and the four basic objectives.

It should be noted that a shift of strategy along the lines proposed will mean important changes in the type of growth and in the structure of the economy.

How feasible are the rates of growth proposed? This is a difficult question to assess in any economy, let alone in one as open to outside influences as Kenya's. Moreover, the data are weak and the mission has not had time to make more than rough tests of feasibility, within sectors or for the whole economy. Nevertheless, as already stressed, the rates of growth required are not greatly different from those Kenya has achieved in the past. The question therefore becomes one of trade-offs, i.e., whether the strategy we propose necessarily implies a sharp conflict with growth and thus a marked reduction of earlier growth rates. The short answer is that we cannot be sure, but that

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1 This figure was arrived at as follows. It is assumed that there is a 5 per cent increase in the urban population due to immigration (allowing for 3 per cent natural population growth). But this involves a rural out-migration rate of only 0.5-0.6 per cent, since the rural population is still nine times more numerous than the urban. Deducting this 0.5-0.6 per cent out-migration rate from the natural increase of the rural population of, say, 3.3 per cent, we obtain the increase of 2.7-2.8 per cent per annum in the rural population.
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even if it were to involve some reduction in growth (as conventionally measured\(^1\)) it would be a price worth paying, in our view, for reasons already given.

However, there is a real danger of too readily assuming that a shift in emphasis to the small, poorer producer must necessarily reduce the growth rate, as if all changes in the present situation or from large to small producers or from less to more equal distribution must necessarily reduce output.

In fact, there are many respects in which the proposed strategy would make a positive contribution to output and growth. We give evidence later to show that the smallholder in agriculture and the small-scale producer in the informal sector are more efficient economically and achieve higher outputs from scarce inputs than the large-scale producers.

The better utilisation of energies of the smallholder, of the small rural producer, of the unemployed school leaver, of those earning a precarious and risky living in the urban informal sector—all those who now have limited access to income-earning opportunities—must clearly add to production, even taking account of the resources required for this purpose. Many of the recommendations which follow are therefore closely parallel to those which should also be made for increasing national production. A technology which is better able to respond to the indigenous Kenyan resource endowment is likely to be better for the growth of the gross national product as well as of employment. If foreign investors are induced to use more local supplies, or to re-invest more in Kenya, or to pay taxes on their total remittances abroad, or to export more—all these measures are also good for the gross national product although advocated on employment grounds. When under-utilised land is brought into productive use by subdivision or reorganisation under the pressure of a land tax—this again is as good for the gross national product as it is for employment. All these examples are drawn from our recommendations, and could be multiplied.

There are of course also examples to the contrary, particularly in the short run. When extension services are redirected from the "progressive farmer" to the small farmer or the woman farmer struggling on a small plot, there may be sacrifices in terms of immediate output; when more selective

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\(^1\) The validity of this growth rate, as conventionally defined, is in any case more questionable than many realise. We do not just mean that we have statistical doubts about the availability of data, difficulties in measuring subsistence production, the exclusion of household and other important activities, and so forth. If expansion is faster for the higher-income groups, or for those sectors of the economy which carry a heavy weight in the product mix as a result of prices artificially raised by protection systems or of monopolies due to the small size of the market, a different and equally defensible weighting system—e.g. weighting income groups by numbers of people involved rather than by share in national income, or weighting sectors by international prices rather than domestic ones—might show a smaller growth rate than the one conventionally recorded. (We have no basis for saying how re-adjustments of this kind would affect the Kenyan growth rate, but it has been shown that they do affect the measured growth rate for developing countries in general.)
policies on foreign investment are adopted, it is possible that the total volume of investment may decline; when protection is re-structured it is possible that some existing firms will suffer. When a temporary restraint is imposed on increases in higher incomes some loss of income and employment may result from the reduced expenditures on domestic service or higher-class consumption goods. But even these risks can be overstated. It is equally possible, for instance, that the larger “progressive farmer” will continue to do well even without concentration of extension services, while the very small farm will now benefit more from extension in terms of increased output. This would give us more equity, more productive employment and more growth all at the same time.

We therefore cannot make any confident statement about the exact effect on the rate of growth of output if our proposals are adopted but, without ruling out the possibility of transitional slowing down for a year or two, we see no reason why the total effect of our proposals must be a reduction in the long-run growth rate below 7 per cent a year.

Short-term effects on immediate production or employment are inherent in any major change of direction. The question is whether the resulting growth will be faster and more solidly based in the long run. As argued in Chapter 20, the sooner necessary changes are made, and if they are made as part of a deliberate and planned strategy rather than piecemeal or under the pressure of strains and intolerable imbalances, the less the cost of re-direction will be.

A wider sharing of the benefits of expansion—redistribution from growth

Under the employment strategy presented in this report, we propose the adoption of the specific objective of bringing every section (and if possible every member) of the population of working age up to a standard of employment productive enough to generate a reasonable minimum income. If high priority is given to this objective, this automatically means that the resources made available by economic growth should benefit those now lacking income-earning opportunities more than those already in possession of a satisfactory and secure living. To the extent that this policy is successful and the number of people in minimum productive employment is increased, the distribution of income will, in fact, have become more equal.¹

We suggest that the necessary reduction in inequality be embodied in minimum real income targets for every household, to be attained through increases in employment. Suitable targets might be as follows (in shillings a month at 1971 prices): for rural households, 120 sh. by 1978 and 180 sh. by 1985, and for urban households 200 sh. and 250 sh. respectively.

¹ See Technical Paper 6 for a more rigorous discussion of the model used.
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Such income standards are not concrete enough in that they are only a short-hand expression for the real components of a minimum standard of living, namely nutrition, housing, clothing, public utilities, access to amenities, etc. We recognise this weakness, but feel that an aggregate target is justified by the advantages of having a specific over-all objective by which to measure and monitor progress. On the other hand, the real objectives must also be formulated. The regular collection of the data needed to determine the reasonable targets for real components of a minimum standard of living, to measure progress in attaining them, and to identify and locate the deficiencies which must next be corrected—all this deserves high priority. High among these essential real components of an income objective must be the elimination of the malnutrition which is now estimated to affect a quarter of all children in Kenya.\(^1\) The formulation of minimum nutritional standards and the setting of targets for the reduction and abolition of malnutrition are strongly recommended. As an example, we would suggest the provision of free and sufficient milk for all children as one of the long-term targets.

Other targets include access to clean water at a reasonable distance (perhaps not more than 1½ miles from any house). Access to basic health services and to basic education should also be developed as part of minimum income objectives, in such terms as distance from schools and clinics, teacher-pupil ratios, and number of physicians and other health personnel per head of population.

The conversion of household incomes into individual incomes will also require much further elaboration. Our figures are meant for an average or typical household of perhaps six to seven persons—perhaps two or three adults and four children. However, the composition of households varies enormously, and so do the income-sharing arrangements in and among households, cutting

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\(^1\) Various nutrition surveys conducted in Kenya show that moderate malnutrition occurs in between 25 and 55 per cent of all children, and severe malnutrition in between 0.4 and 1 per cent. Malnutrition in infancy and early childhood is one of the major factors accounting for the high death rates in this age group. Nutritional problems are not confined to young children only. A sample of 28,520 children from 108 schools was examined in 1962–64 and goitre was found in 30 per cent of them (the Government has now introduced iodisation of salt to prevent this state of affairs). The diet of schoolchildren is in many instances suboptimal or deficient. In a general nutrition survey conducted between 1964 and 1968 the diet was found deficient in protein in three of the eight sample areas and deficient in calories in four of the eight areas. Deficiencies in minerals and vitamins were also found. Deficient nutrition thus affects, in varying degrees, large sections of the whole population, young children being the most vulnerable group. (Further studies are needed relating nutrition to productivity.) This succession of hazards from birth to school, as well as malnutrition, chronic infections, goitre and dietary limitations when children are attending school, have a considerable effect on the learning ability of schoolchildren. In other words, all the factors mentioned prevent a large proportion of schoolchildren from making the best use of the education offered to them, and are partly responsible for the heavy drop-out. Malnutrition of children thus has a profound influence on an individual's future chances of employment and on the productivity of the future population of the country.
across the division between rural and urban households. The household income target will have to be related, for operational purposes, to different types and sizes of households.

We believe that some such income standards would be attainable with the policies recommended in the subsequent chapters of this part of the report. But where would one find the resources required to bring this about? The brief answer is: through redistribution from growth. Growth alone is not enough even if those below a reasonable minimum should participate fully in it: the time involved in reaching these income standards would be too long; there are too many of the unemployed and working poor for that, and they fall too far below the minimum at present; in any case, their very lack of productive employment and lack of a productive base for employment makes it virtually certain that without special policies and productive investment they could not fully share in national growth.

However, redistribution alone would not achieve this goal either. The country is too poor for that at present; the redistribution required would be too drastic and would undermine the productive system on which it depends. We do not know enough about the impact of redistribution on the incentives and savings of the upper income groups to take excessive risks. What is needed is growth plus redistribution, or more precisely redistribution of the fruits of growth. The power of redistributed growth in a rapidly expanding economy such as Kenya's over any reasonably long period is more formidable than is often realised.

We can quantify growth from redistribution as follows. From data in Chapter 1 and Chapter 3 respectively, it can be deduced that perhaps 40 per cent of the rural population and 25 per cent of the urban have no income, or an income that is insufficient. At the most, they share 11 per cent of rural incomes and 6 per cent of urban incomes, or over-all less than 10 per cent of total incomes. If these persons, receiving the bottom 10 per cent of total income, could equitably share in the national growth rate of 3½ per cent per head, and if in addition the real income per head of those sharing the top 10 per cent of the income scale could be stabilised, then the income of the unemployed and working poor per household or per head could be raised by

1 Derived from the estimates of land holding and incomes in Chapters 1 and 5.
2 Output expansion at the rate of 7 per cent per annum, minus 3½ per cent population growth.
3 Representing under 1 per cent of the total population.
4 Stabilisation in money terms for a temporary period of five years is suggested in Chapter 16; moreover the stabilisation proposed would apply to incomes before tax, which means an actual reduction in income if taxation is tightened up. In this section, our calculations assume stabilisation in real terms, but for a longer period than five years—namely, as long as necessary to attain the minimum income targets.
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7 per cent—3½ per cent from sharing in national growth and 3½ per cent from transferring the growth per head in the top 10 per cent of the incomes to the lowest 10 per cent. Growth per head amounting to 7 per cent would mean about 50 per cent growth by 1978 (the terminal year of the next development plan and the first stage for our proposed minimum income target), and doubled incomes per head for the poorest group well before 1985.

The fulfilment of both of these preconditions seems to us quite feasible. For the unemployed and those without sufficient employment to share in the national growth would be the minimum result we would expect from the adoption of the kind of policies and measures which will be suggested. The stabilisation of the incomes of the top 10 per cent or less of incomes (affecting under 1 per cent of all income receivers) is the minimum result we would expect from our proposals for incomes and fiscal policy and the other measures for redirecting policy and equalising access and opportunities. The third underlying precondition is, of course, the continued growth of the economy at the rate of 7 per cent per annum. We cannot be certain that this growth rate will be achieved, though the model in Technical Paper 6 enables one to see the effects of any change in growth rates.

It must be emphasised that although they represent a sizeable number and a high proportion of the population, the people who are affected by unemployment and insufficient income in fact obtain only a small proportion of the national income—10 per cent or so. The reverse of this sign of inequity in the present system is the power of redistribution from growth (far beyond what is usually realised) to raise the incomes of the unemployed and working poor in a remarkably short time.\(^1\) Moreover, if the redistribution could be broadened by stabilising in real terms not the top 10 per cent of the incomes received but the top 25 per cent, the impact on the unemployed and working poor would be sharply increased.\(^2\)

According to table 26, the bottom 10 per cent (by income) of total urban households reach up to some 225 sh. a month, while the bottom 25 per cent, estimated to share the bottom 6 per cent income slice, reach up to some 300 sh. a month. The first group is entirely and the second group largely below our minimum income target of 250 sh. a month for 1985. No similar estimate can be given for the rural population, but the bottom 10 per cent of all rural incomes can be safely assumed to fall entirely below our minimum income target for 1985 of 180 sh. a month. Doubling the average income of these bottom income groups will certainly bring large sections of these groups above

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\(^1\) See Technical Paper 6. With a capital-output ratio of 1:1, the low incomes could be doubled within seven years.

\(^2\) In fact, the income per head of the unemployed and the working poor could be increased by over 12 per cent per annum.
Objectives and over-all strategy

the minimum line; the precise extent to which this happens will depend upon the concentration of the increase among the poorer beneficiaries. Our proposals are designed to concentrate the effect upon the poorest section and thus maximise the proportion of the working poor brought above the minimum income line. It is part of our approach that the proportion of families below the poverty line should be currently ascertained by social surveys, and the progress in its reduction monitored. Some detailed problems in preparing investment programmes in connection with minimum income targets are discussed in Chapter 19. This is not only a question of technique, however, but also one of the political will to develop the types of investment programmes needed.

Mention should be made of one of the major assumptions involved in what has been said so far. We have considered the quantitative possibilities of transferring resources created by economic growth from people at the top of the income scale to those without sufficient work opportunities at the lower end. This process, however, cannot be simply a matter of redistributing income in the sense of making cash transfers, even if this were desirable. The achievement of fuller employment by redistribution requires more investment of a type that generates productive employment. Our numerical framework therefore implies that the growth resources which are being transferred from the top to the bottom are converted through productive investment into permanent opportunities for earning reasonable incomes. It is only if the capital-output ratio for this special type of investment is as low as 1:1 that we can simply equate the sums made available by redistribution with the increase in the earned incomes of the beneficiaries of the investment.

The chapters which follow in this part of the report outline the kind of investment which would be involved—hybrid seed for the small farm, credit for the small rural non-agricultural producer, more equipment for the family planning clinics, investment in research on labour-intensive technologies, second-chance educational institutions, development of processing of agricultural products for export, etc. It is obviously difficult to be certain in advance what the ratio between the investment resources put in and the resulting permanent income for the unemployed and working poor will be for such a wide and heterogeneous collection of investment projects. The over-all ratio for the Kenyan economy as a whole is at present more like 3:1 than 1:1—£3 of investment are needed to produce £1 of permanent income: but our whole strategy is directed to reducing the volume of new investment required by bringing into

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1 In absolute terms, 7 per cent growth of the top 10 per cent of Kenya’s national income would provide resources of £3 million in the first year, but about £50 million over a five-year period (if the incomes received by those in the top 10 per cent income bracket are stabilised). However, half of these sums would be needed to provide for the natural increase in numbers of the upper income groups (assumed to be 3½ per cent per annum) so as to maintain incomes per head.
utilisation the presently wasted time and earning power of the unemployed and the working poor. If we could lower this ratio to 1:1, then the numerical illustration would stand. If not, however, then either the base from which the growth resources will have to be taken must be broadened, or alternatively the process of redistribution from growth must be continued for longer than we have assumed in order to reach a given result—such as to double the present average incomes of the unemployed and the working poor. But the actual time required to double the income of the poorest group is not very sensitive to the actual capital-output ratio, as shown in Technical Paper 6. That paper also shows the more precise relationship between the percentage of top-income receivers covered, the rate of growth of the economy, the capital-output ratio of the special investment and the results obtainable.

It cannot be emphasised too much that our strategy is based not on permanent transfers of income to the lowest income group through redistribution from the top, but on investment to provide the unemployed and the working poor with the basis for earning reasonable minimum incomes the levels of which can be raised over time. Initially, the target would be to double the present average income of the lowest income group by giving an income to the unemployed and raising the incomes of the working poor. Our hope and expectation is that once this has been achieved the economic system which will have been created as a result of the new strategy will continue afterwards to make for more equal income distribution and an economic growth which is the healthier and faster for being more widely shared and more equitably distributed.

National integration of the economy

The national integration of the economy is an essential part of an employment strategy, and appears in various forms in the policies described in the following chapters. One set of policies is designed to tackle regional inequalities in conjunction with the problems of relations between tribes and ethnic groups. Immobility of labour, irrational hiring practices, lack of access to credit or water by some groups emerge as obstacles to greater equity and more productive employment. Yet regional and tribal identity also have positive aspects, of which the Harambee movement is one. More fundamentally, an employment strategy can be sustained only on the basis of a national consensus, when all concerned feel that they benefit fairly. There is no need to belabour this as an objective since in any case it has the highest political priority in the eyes of the Government, but its connection with an employment strategy and the practical measures that follow from it are worth emphasising, since they are dealt with in our report.
Land policy is an example. In our approach, we have tried to reconcile the national interest in tribal integration, the employment objective of effective land utilisation and the equity and employment interests of the groups affected by such shifts in land ownership and land utilisation. In various ways, our policies are concerned with the arid or low-potential areas in the North-East, or the southern part of the Rift Valley. Here again, our concern has not only been to protect employment opportunities for the groups which now occupy these areas, but also to utilise the great land reserves in the service of an employment strategy. In the future, as the pressure of population on high-potential land increases, perhaps faster than technical intensification of land use in high-potential areas can increase productivity, the areas just referred to could provide productive opportunities for a large number of people. It is by no means only in the specific context of agriculture that we consider ways of dealing with regional imbalances: we also suggest regional quotas for access to education and for government expenditures on health, education and roads.

Kenyanisation is another aspect of national integration. Our proposals are not only based on the assumption that Kenyanisation will be continued and in many areas virtually completed; they are in fact specifically designed to help employment by increasing the share of local enterprise in the industrial sector, by the further subdivision of farms, by the acceleration of growth of the urban informal sector through the review of a number of present restrictions and prohibitions, by the development of subcontracting and in numerous other ways. In general, our emphasis on a shift from the centre to the periphery almost automatically coincides with the objectives of Kenyanising the economy, as distinct from individual jobs. Moreover, the kind of strategy here suggested can be carried through only by administrative machinery fully controlled by Kenyans.

At the same time, there are some instruments of Kenyanisation which are more helpful to the achievement of fuller employment for Kenyan citizens than others. The skills and resources of non-citizens, both expatriate and resident, are often valuable for employment and training precisely in fields that are especially important in an employment strategy, such as the development of small-scale and rural non-agricultural enterprise.

In various places in the report opportunities of combining robust Kenyanisation policies with employment objectives will become apparent. This may, therefore, be the place for recommending three principles for over-all Kenyanisation in relation to employment strategy.

In the first place there are certain categories of skill, such as those of technicians, engineers, architects, accountants, doctors and dentists, in relation to which the proportion of Kenyans in the total stock of manpower is still rela-
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...tively low. It is important, therefore, to ensure that professional and technical manpower is not prematurely displaced before qualified Kenyan citizens are ready to take over.

Secondly, our general strategy places much emphasis on the growth of small enterprises in such activities as manufacturing, repairs, the indigenous capital goods industry and construction. The growth of this sector will depend on the existence of a body of entrepreneurs with the necessary skills, experience and capital. At the moment, a significant proportion of such manpower is to be found in the Asian community. As Kenyanisation proceeds in small-scale commerce, the current government policy to divert the resources of the Asian community to small-scale manufacturing and related non-agricultural enterprises should be vigorously pursued. This should be tied in with training of Kenyan entrepreneurs and business and technical personnel. Kenyanisation policies should be deliberately planned to bring about this shift of resources accompanied by training and participation of Kenyans in the growth of such new enterprises.

Thirdly, consideration should be given to the method of taxing the employment of non-citizens in fields where it is proposed to substitute Kenyans for expatriates. Such taxation might usefully supplement the present system of awarding work permits at the personal and administrative discretion of the officers in the Kenyanisation Bureau, and would have the advantage of reducing the administrative burden of the system of work permits as well as preventing some of the abuses that are otherwise inevitable in such a system. At the same time, it will bring some revenue to the Government while providing an incentive to employers to substitute Kenyan for non-Kenyan manpower.

National integration also raises questions concerning Kenya's status in relation to the outside world. Any strategy for the future has to take account of the fact that neither Kenya nor even the East African Economic Community as a whole is or could be self-contained, at least without great hardship. Kenya is embedded in an international economy and in an international political structure, both of which it can influence through the United Nations system, but only very slightly.

Freedom of choice in domestic policy depends ultimately on the relaxation of external economic pressures. Import restrictions imposed to ease them can aggravate internal difficulties. Moreover, cuts in essential investments impair not only the economy's long-term expansion and employment but also its chances of becoming economically independent with a truly national industrial structure. At present, in 1972, Kenya is facing difficult choices about which imports to cut. These difficulties are the more acute because the industries created by past policies depend heavily on imported inputs, which makes import policy more inflexible.
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Some of the changes which are needed are implicit in our discussion of internal policy. Developing lines of production that make heavy use of labour and domestic materials will save foreign exchange in capital goods and intermediate products. Making the distribution of income more equal will reduce the demand for imported consumer goods and for locally finished goods with a heavy import content. But it will also increase the domestic demand for food and related products, and thus eat into export supplies unless agricultural output rises at a vigorous rate.

This does not suggest that trade links should be cut, or private investment or aid rejected; what it does suggest is that import policies should be deliberately used to reduce dependence on imports; that private foreign investment should be accepted on terms that make the country ultimately free from dependence upon it; that requests should be made for the sort of technical assistance that renders such assistance ultimately of only marginal importance; and that educational aid should be used to construct an educational system fully capable of meeting the nation's needs. More aid and other external resources can be useful to help to finance the structural changes needed to place Kenya on a different growth path, but these resources must be obtained selectively, without creating new dependence and blocking the road to economic independence.

These tasks are more difficult because in world terms the Kenyan economy is a small one. They would be easier for East Africa to tackle as a whole than for any East African country separately. This is the true rationale of East African economic integration—that it permits a degree of independence impossible for each country separately, provided, of course, that the whole range of policies involved is shaped accordingly. However, a new development strategy requires co-operation extending far beyond the region. Reshaping external strategy will be harder if foreign firms and governments, as well as international agencies, do not see the connections between their own policies and the long-term needs of Kenya, and fail to take those needs into account.

Action to remedy imbalances

Three fundamental imbalances may be singled out among those which the following policies attempt to rectify. The first is the imbalance between the magnitude of the task of expanding productive employment to keep up with the growth of population on the one hand, and the opportunities provided by applied technology on the other hand. The second is the imbalance between the resources concentrated at the centre and those available at the periphery. The third is the imbalance between the support given to the formal and informal sectors of the economy respectively. These fundamental imbalances take many forms and manifest themselves in different connections throughout the various chapters of this part of the report.
If one advocates an employment strategy for Kenya—as we do—the disadvantage under which one labours as a result of the imbalances between population growth and available technology is of staggering proportions.\(^1\) If the same technology were used in Kenya as in Europe and the same structural and sectoral distribution of new jobs were resorted to, Kenya could provide less than 1 per cent of the number of new jobs or bases for employment which would be needed by new entrants to the labour market. This is an extreme picture; obviously Kenya does a great deal more than provide 1 per cent of the jobs required, by producing different products and by using a different technology for producing given products. Specifically, the small-scale and informal sectors of Kenya's economy produce different products with an entirely different technology. Yet however exaggerated, the comparison gives a measure of the tremendous imbalance to be overcome and the great efforts needed.

A solution calls for a two-pronged approach: the rate of population growth which creates a need for new employment should be slowed down, and the nature of the over-all technology should be changed so that the available resources can be spread more widely to provide the number of jobs required—a number which will, it is hoped, be reduced by a successful population policy. This approach will also directly raise family standards of health and real income, and thus help to reach the minimum income target. Accordingly, Chapter 8 recommends measures directed towards laying the foundation for an effective future population policy based entirely on the principle of voluntary acceptance by individuals of the advantages of family planning through a process of massive and widespread education and information. The preconditions for family planning on a more effective scale, to cope with the expected increased demand for such services in the future, are now being created. As regards the other component of this policy, Chapter 9, on technology, in particular, but also the chapters on agriculture, industry, services and the informal sector, contain proposals designed to increase the number of work opportunities which can be provided from available resources. Such proposals include changes in the sectoral distribution of employment, with emphasis on those sectors where job creation is least capital-consuming—small holdings, small-scale services, the informal sector, etc.; emphasis on products appropriate to the Kenyan environment and to Kenyan needs; and above all, proposals to give additional incentives to use efficient labour-intensive technologies.

\(^{1}\) Comparing Kenya with a European country, we find that the rate of increase in the labour force of adults seeking employment is perhaps six to eight times higher in Kenya. On the other hand, the capital resources available for creating new employment opportunities—net investment—perhaps amount to only one-twentieth or so of what they are in Europe, mainly as a result of lower income per head. In other words, Kenya has to find, say, seven times the number of jobs with one-twentieth of the resources for each job. This is a disproportion of the order of 1:140.
where they are available, to seek them out where they can be found, and to create and develop them where they do not now exist. Efficient labour-intensive technologies are certainly not sufficiently numerous, or are not sufficiently available, at the present time for Kenya's immense employment needs. The development of a national technological capacity is a milestone in the move towards economic independence and national integration. International action of the right kind can be vital in assisting Kenya, like other developing countries similarly placed, in this task.

The second fundamental imbalance, between the centre and the periphery, has already been referred to in previous parts of this report. In numerous places, this report has to deal with forms of this imbalance and to propose remedies. Particularly important and directly related to the emergence of the employment problem is the rural-urban imbalance and the resulting migration to the cities, especially Nairobi. Our strategy is designed to affect migration indirectly rather than by direct controls. Employment opportunities have to be found for people whether they migrate or not, and in any case urban migration and modernisation are essential elements in Kenya's development. The improvement of rural life is a part of an employment strategy, and so is the narrowing of urban-rural differentials. We assume that under our proposals urbanisation will continue at a rate slightly less than the recent past but with an increased share for the smaller towns. Among the policies suggested is the use of quotas in various forms, including ceiling quotas for government expenditures in Nairobi and minimum quotas for expenditure in the arid and other disadvantaged regions.¹

Thirdly, the relationship between what we call the modern formal sector and the urban informal sector has already been referred to in our statement of the problem, and diagnosed as crucial for an employment strategy. We try to move away from the present ambivalent government policy towards the informal sector. This policy consists of a mixture of harassment and prohibition on the one hand, and indirect and mainly negative promotion through non-enforcement of minimum wages or tax laws on the other, leaving the informal sector handicapped through lack of access to credit, government services, contracts, or efficient technologies. In all these respects we suggest changes: to benefit the informal sector more positively; to treat it as an active element in an employment policy instead of ignoring it; to give it equal access or even preference; to promote it instead of harassing it. Our manifold proposals in this direction will be found brought together in Chapter 13, on the informal sector, but are also spread throughout all the other chapters which now follow.

¹ See Chapters 16 and 18.
Rapid population growth is part of the Kenyan reality of today. Our concern with this is not based on a fear that the country cannot support a much larger population than at present. Rather, we are concerned with the obstacle which rapid population growth constitutes for an effective employment strategy. Not only is the task of future job creation multiplied by the rapid population growth, but also this growth increases the present burden of dependency and the incidence of poverty. It also diverts resources from job-creating investment to providing the basic services required in trying merely to maintain existing standards for a rapidly increasing population.

From a technical analysis of the age structure at the time of the 1969 census it has been estimated that Kenya's birth and death rates were about 50 and 17 per thousand respectively. This yields a rate of natural increase of 3.3 per cent per annum. As the growth at the time of the previous census (1962) was estimated at less than 3 per cent, it would seem that a significant acceleration in the rate of increase has taken place. Moreover, as there is considerable scope for further decreases in infant and child mortality, the rate of population growth could well continue its upward course. Should maternal health and mortality rates also improve, we may see some rise in the birth rate as well. Considerations along these lines lead one to conclude that Kenya's population may already be growing at 3.5 per cent per annum, and that in the absence of an effective population policy it may move further towards an annual rate of 4 per cent. Projected forward in time, such rates indicate that Kenya's population would double within 20 years or less.

It is important to remember that population trends are not normally amenable to rapid change. The existing age structure determines to a significant degree the growth pattern for the coming generation and beyond. It has been shown, for example, that even if Kenya's rate of reproduction, in 1975, should instantaneously fall to the point where the existing population merely replaces
itself, while mortality continues to decrease moderately, the population would still continue to grow rapidly for the foreseeable future, from an estimated 11.3 million in 1970 to 15.2 million in 1990, 17.4 million in 2000 and 20.1 million in 2020. The main explanation for this built-in momentum for future growth is the extraordinary youthfulness of Kenya’s population.

Needless to say, the abrupt fertility decline assumed in this set of projections is totally unrealistic. To obtain a better idea of the problems and options facing Kenya, it will be helpful to turn to a set of four different projections prepared by the Government. They are based on the following assumptions:

(1) Fertility remains unchanged in all projections until 1975.

(2) Mortality continues to decline, leading to an increase in average expectation of life at birth from 49 years in 1969 to 60 years in 2000 in all projections.

(3) Fertility assumptions differ for each set of projections after 1975 as follows:

Series A. The total fertility rate is assumed to remain unchanged at 7.6.

B. The total fertility rate is assumed to fall to 4 by the year 2000.

C. The total fertility rate is assumed to fall to 3 by the year 2000.

D. The total fertility rate is assumed to fall to 2 by the year 2000.

These assumptions yield the following figures for Kenya’s total population by the year 2000: series A, 34.3 million; series B, 28.1 million; series C, 26.2 million; and series D, 24.3 million. It will be noted that even in series D Kenya’s population will double in size by the end of the century. In series A, the doubling will occur about 1990. It is, however, not the numbers as such that give cause for concern but their implications for living standards and employment policy. The question is whether the country will be able to cope with the growing need for schools, health services, other public and social services and facilities, and the rapidly increasing problem of providing productive employment for the adult population. To illustrate these problems more specifically, projected figures for pre-school and school-age population and young entrants into the labour force are given in table 36.

That table will dispel any doubts about the efforts required by Kenya under all four sets of projections in order to give adequate care and education to today’s and tomorrow’s children and provide for the new entrants to the potential labour force. Kenya’s health services and school system are already strained. To provide for a school-age population three or four times as large as

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3 That is, the average number of children born alive to a woman who survives to the age of 50 years.
### Table 36. Projections of the number of pre-school children, children of primary-school age and young labour force entrants under different assumptions about future rates of population growth, 1970–2000

(Thousands; italics indicate changes from series A)

<table>
<thead>
<tr>
<th>Year</th>
<th>Series</th>
<th>Pre-school population (0-5 years)</th>
<th>Primary-school-age population (6-12 years)</th>
<th>Young entrants into the labour force (15-19 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>A</td>
<td>2,556</td>
<td>2,235</td>
<td>1,187</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>2,556</td>
<td>2,235</td>
<td>1,187</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>2,556</td>
<td>2,235</td>
<td>1,187</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>2,556</td>
<td>2,235</td>
<td>1,187</td>
</tr>
<tr>
<td>1975</td>
<td>A</td>
<td>3,140</td>
<td>2,652</td>
<td>1,401</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>3,140</td>
<td>2,652</td>
<td>1,401</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>3,140</td>
<td>2,652</td>
<td>1,401</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>3,140</td>
<td>2,652</td>
<td>1,401</td>
</tr>
<tr>
<td>1980</td>
<td>A</td>
<td>3,780</td>
<td>3,235</td>
<td>1,662</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>3,605</td>
<td>3,235</td>
<td>1,662</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>3,517</td>
<td>3,235</td>
<td>1,662</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>3,480</td>
<td>3,235</td>
<td>1,662</td>
</tr>
<tr>
<td>1990</td>
<td>A</td>
<td>5,536</td>
<td>4,795</td>
<td>2,448</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>4,368</td>
<td>4,312</td>
<td>2,448</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>3,995</td>
<td>4,140</td>
<td>2,448</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>3,618</td>
<td>3,997</td>
<td>2,448</td>
</tr>
<tr>
<td>2000</td>
<td>A</td>
<td>8,192</td>
<td>7,067</td>
<td>3,627</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>4,947</td>
<td>5,134</td>
<td>3,154</td>
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<tr>
<td></td>
<td>C</td>
<td>3,921</td>
<td>4,529</td>
<td>3,001</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>2,920</td>
<td>3,908</td>
<td>2,847</td>
</tr>
</tbody>
</table>

Key to series: A. Total fertility rate remaining unchanged at 7.6. B. Total fertility rate beginning to decline in 1975 and falling to 4 by the year 2000. C. Total fertility rate beginning to decline in 1975 and falling to 3 by the year 2000. D. Total fertility rate beginning to decline in 1975 and falling to 2 by the year 2000.

Age groups are according to the existing educational system, not according to proposals made in Chapter 14 of this report.

Source: *Kenya Statistical Digest, June 1971, tables 4–6 and Appendix II*.

the present one (series A), would make it more difficult to attain the national goal of universal primary education, not to mention the broader goal of higher living standards and fuller employment.

It is sometimes suggested that this is a misrepresentation of the problem, and that a rapidly growing child population can be taken care of by an equally rapidly growing labour force. The fallacy in this argument is twofold. First, the labour force which will have to take care of the next generation is in part already at work, and the other part will for the next 15 years be recruited from the existing child population. Its size is consequently known, and will not be
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affected by the future birth rate until much later. By 1985, there will be about 9 million persons of working age (15–59 years) in Kenya, whatever happens to fertility. Thus the larger number of children that are born, the heavier will be the burden on the working population. Secondly, the rapidly increasing child population is bound to have an adverse effect on the quality and quantity of education that will be available to today’s and tomorrow’s children. Thus, the dependency burden will increase at the same time as the adult population will be less well equipped to carry it. This situation, here described in over-all terms, will also directly face individual families.

A decline in fertility would have marked effects on the dependency burden of the adult population—that is, on the number of children and old people who must be supported per 100 people of working age. With a continuation of current fertility levels, the dependency ratio would rise to 114 by the year 2000, as compared with 106 in 1970. In many developed countries the ratio is somewhere between 55 and 65; in Kenya with drastically declining fertility the ratio could fall to 62 by 2000. Other things being equal, this could raise average incomes per head by 32 per cent.

Kenya’s aspirations to acquire a place of greater independence in the world community are more a matter of economic power than of population size. The same applies to the internal importance of different population groups. Everthing else being equal, numbers are obviously important. But, in the modern world “everything else” is highly unequal and economic power is strongly associated with levels of health, education and training of the population and the degree of economic development that tends to follow.

Much discussion in Kenya has been concerned with the idea that family planning is an alternative to accelerated development and employment creation, and that it is an undesirable alternative, which should be rejected. Furthermore, regional and ethnic rivalries have often been cast in a framework of relative population size, and may thus have led to rejection of family planning for fear that political power would be lost. Both of these views fail to do justice to family planning as one part of an integrated development strategy including a wide variety of measures to increase investment and employment and ensure the survival of children and mothers. The National Assembly Select Committee on Unemployment seems to reflect a negative view of family planning when it states: “The Committee noted that the population growth has surpassed the rate of industrial and agricultural growth. Despite recommendations by some sources that the solution to this would be programmed family planning, this Committee . . . recommends that measures should be . . . taken immediately to accelerate the rate of industrial and agricultural growth . . . ”.1

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1 Report of the Select Committee on Unemployment, op. cit., p. 8.
The Committee is quite right in rejecting family planning as an alternative to accelerated development and employment creation. Family planning should be merely a part of a major effort to create a better life for a larger proportion of Kenya's people. On the other hand the statement seems to us to be mistaken in identifying family planning and development as alternatives rather than mutually supporting measures. In our view it is also a mistake to state that population growth has surpassed industrial and agricultural growth. Fortunately, this is not the case; over-all growth has been twice the rate of population increase. If the statement were correct, the need for family planning would seem to be all the more urgent.

Family planning to date

As early as 20 years ago, a national family planning association was started in Kenya. By 1966 the Government had decided to "pursue vigorously policies designed to reduce the rate of population growth through voluntary means". Kenya thus became the first African country south of the Sahara to declare itself in favour of an active population programme. Since then the Government has frequently reaffirmed its commitment to the programme.

Though considerable effort has gone into the programme, its accomplishments in terms of reduced fertility are rather limited so far. Serious shortages of staff, less than optimal use of external assistance, and political and social resistances have all played a part in this. However, family planning affects an important part of the pattern of human behaviour, and a slow beginning is to be expected. This does not necessarily indicate the future course of events, nor should it deter the Government from adopting a more vigorous approach to the pursuit of its stated objectives.

Various surveys confirm that social status is closely related to family size and that consequently there are considerable private misgivings about family planning.¹ On the average, the desired family size comes close to the actual size, that is, between six and seven children.

Nevertheless, in surveys as well as in more informal discussions of the need for family limitation, there are many signs that resistance is not as strong as the findings just mentioned might lead one to believe. Thus in one survey covering a number of groups which together account for 70 per cent of Kenya's African population, it was found that 38 per cent of rural women saw "nothing good at all" in having many children. Not unexpectedly, the chief explanation was

above all the heavy burden of expenditure for school fees, food and clothing, which no less than 75 per cent of the women found onerous. Recent surveys of attitudes to family size seem to indicate that the number of children desired is decreasing. The underlying climate of public opinion is favourable to family planning. Community leaders and social services and medical staff who are in close touch with people’s daily problems agree that family planning would be in great demand if anxieties were allayed and more facilities made available.

Statistics on the number of visits to family planning clinics demonstrate a growing interest. Since 1968, when the programme was launched in earnest, the number of first visits has increased from 11,700 to 41,100 in 1971. About 90 per cent of first visitors are reported to accept contraceptive advice. The retention and continuation rate for the loop and the pill respectively are, however, believed to be very low. A recent pilot study supports this view, since it reveals that 80 per cent of acceptors leave the programme within two years. There is every reason to believe that insufficient counselling and follow-up services are partly responsible for such poor results. It is at any rate evident from available data that only a small fraction (less than 5 per cent) of the more than 2.3 million women of child-bearing age have any contact at all with the programme.

Basic principles of the national family planning programme

The basic principles of the national family planning programme are as follows:

1. The programme is an integral part of Kenya’s efforts towards social and economic development.
2. The programme is linked to maternal and child health services.
3. The programme to reduce the birth rate is wholly voluntary, with full respect for the wishes, religious beliefs, and customs of individual parents.
4. The programme places emphasis on spacing of births rather than on limitation of numbers.

The advantages of a programme based on these principles are considerable. It is part of a service meant to safeguard the health of mothers and children, and it is linked to the beliefs and values of the people. Furthermore, a system of reproduction based on low fertility and low mortality rather than high fertility and high mortality reduces ill health and suffering at the same time as it releases human energy for tasks other than reproduction. Moreover, the good health of mothers and children is a prerequisite for further reproduction—a truth well known in an earlier time in Kenya when various restrictions placed on the

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new mother ensured that she was unlikely to be pregnant again until her infant was 2 or 3 years old. This is the equivalent of the spacing of children currently advocated in Kenya's national programme of family planning. Thus, the programme is based on national goals and traditional values in a modern re-interpretation.

Proposals for the expansion of family planning

The existing principles for a programme of family planning in Kenya seem to have been appropriate to the early stages of such a programme. The Government acted slowly, but already the potential acceptance shows encouraging trends. Thus whereas in 1967, the year after the Government's adoption of a national programme, there were few facilities and in total only 9,397 visits by women to the available clinics, by 1971 there were many more clinics and 179,756 visits. Certainly from the points of view of development and of employment policy, and probably also from the point of view of public acceptance, it is now appropriate to move to a far more active mass campaign in support of family planning.

Maternal and child health services cannot be multiplied overnight. A mass information campaign, if successful, could put great demands on existing services. Nevertheless, the problems caused by high population growth are already urgent, and one must consider immediate solutions to the problems of inadequate health facilities. The capacity of the existing health care system could be expanded through increased training of existing personnel in family planning. It is also possible to improve the situation indirectly through greater health education. Preventive health care is at present weak, and there is a heavier burden on the curative services than would be the case if hygiene and routine personal health measures were more effectively practised. Yet another way of relaxing the constraint imposed on family planning by the present health service limits is to rely strongly on methods of family planning which bypass the health services. Such methods, especially the use of the condom and of coitus interruptus, were widely applied in the now developed European countries before other methods involving medical prescriptions were known, and were largely responsible for a big decline in birth rates. We advise maximum education in the use of condoms and their wide free distribution. This need not detract from the principle of a link with maternal and child health services.

Despite such action as we have just described, insufficient health facilities and personnel will remain a constraint in the short term. It would be desirable for the Government to explain this dilemma in its information programme. Existing deficiencies in health services are in themselves an important reason
for people to engage in careful planning of family size. Measures such as greater attention to children’s nutrition, the use of the condom to avoid pregnancy as well as venereal disease, and inculcation of the idea that if one has fewer children they can be raised and educated with fewer losses through sickness and death, are all relatively cheap and straightforward.

As a measure of the importance of foreign assistance for the national family planning programme, it may be noted that the Government of Kenya has estimated that it amounts to £64,000 (five-sixths of which is accounted for by the imputed value of staff and other facilities). A large share of foreign assistance has been spent on actual delivery of family planning services by foreign staff, who, in fact, are responsible for 80 per cent of such services. Without underestimating the staffing problems of Kenya’s Ministry of Health, the conclusion appears unavoidable that this arrangement is unfortunate. Kenyan citizens, familiar and sympathetic with local customs, must be assumed to be generally better suited to handle such delicate matters as family planning. It is also plausible that the employment of foreign staff in actual field work may increase political resistance to the programme.

A five-year plan for the expansion of the national family planning programme is now under preparation. We hope that the following recommendations will be useful in connection with that plan.

A successful family planning programme will require major changes in attitudes and behaviour patterns of long standing. It is thus difficult to predict how long it will take for change to occur. As in all types of planning there is nevertheless a place for targets and sequencing of action. It appears that the Government’s draft plan is cautiously conceived as follows. At first, expansion would be mainly concentrated in those parts of the country where family planning has already gained some acceptance. High-quality service, including full-time service by health officers, is proposed. The specific target in terms of the number of births prevented is set at about 230,000 for the period 1972–77. This would be equivalent to perhaps 7 or 8 per cent of total expected births. The information and education programme is limited so as not to create an imbalance between the availability of services and the demand for them. However, concentration on a quality service in a limited area with limited targets may obscure the national dimensions of the problem. Targets for the information campaign are as important at this stage as targets for the number of births prevented. This is so because the need to create a demand for the service must extend well beyond the present area of immediate demand. Such a fundamental, national campaign is now required in family planning.

The plan involves a stepped-up training programme for existing personnel as well as large-scale expansion of all services and facilities, including those for training of all categories of health staff. It will further include major intensifi-
cation and extension of education and information about family planning. In general, the mission strongly endorses all these proposals; in addition, it would like to suggest certain complementary steps and to make a few observations concerning certain aspects of the planned expansion of the programme.

The strategy for the expansion of the programme appears to be to concentrate initially on the parts of the country where health services are most nearly adequate; in time, coverage is to be extended to the entire country. To the extent that family planning is seen as being dependent on the availability of requisite health personnel and related facilities, such an approach is unavoidable. Similarly, to the extent that an improvement in the general state of health of the population, and of infants and children in particular, is dependent on the availability of health services, such a strategy is logical. It is a general prerequisite for a successful programme of family limitation that infant and child mortality must have declined to levels at which the survival of the family is no longer dependent on the birth of a large number of children. This relationship has been empirically validated for a number of developing countries.

However, it is common knowledge and experience that there are many people everywhere who will not go to hospitals or health centres unless they feel forced to do so on account of illness. Family limitation is of course not a health problem in the ordinary sense, and there is reason to believe that many Kenyans, like many people elsewhere, will continue to treat it as a matter of private concern only. Moreover, we have already emphasised how important it is that family planning techniques should not require services based on health clinics; the pill is frequently used regardless of the availability of medical supervision.

Accordingly, we suggest that the self-help or non-medical aspect of the family planning programme could with advantage be given special emphasis. This has special implications for the education and information programme. It also serves to give emphasis to an improvement of preventive health care.

One of the main advantages of a more forceful appeal to the self-help, or non-institutional, approach to family planning is that there is much less reason to worry about the creation of imbalances in the supply of services and the demand for them through a vigorous education and information programme. This danger rightly causes the Government some concern. Rather, since health services are in short supply and will remain so for the foreseeable future, there is reason to explain this situation carefully, and to emphasise that there are effective alternatives to the services provided by family planning clinics. Since the limited supply of health services is a matter of common experience in Kenya, the explanation will be readily understood. It can then be added that health services as well as schools and teachers are being made available as fast as circumstances permit but will never become available on a sufficiently large scale unless family size declines. The same applies to the availability of
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land and employment opportunities outside agriculture. Considering Kenya’s experience of extremely rapid population growth during the past few decades, it seems certain that there is a popular basis for an understanding and acceptance of such explanations if properly presented. What is lacking in the present situation is probably, among other things, appreciation of the Government’s limited ability to solve the problem by the provision of adequate public services.

In addition to expansion of institutional health care under the national family planning programme, the Government is considering various schemes designed to strengthen preventive health care. The mission strongly endorses existing proposals in this field, including the teaching of the elements of nutrition and hygiene in the schools and a large-scale expansion of facilities for adult education in basic preventive health care. These measures are fundamental to the improvement of the general state of health of the Kenyan population, and indirectly to the success of the programme, through the link between the child mortality rates and the desired number of children.

The government policy of increasing local participation in the development effort is a natural complement of a policy of creating a widespread public opinion in favour of smaller families. The high economic return on family planning can easily be demonstrated through suitable educational material, and thus be made an important factor in local decisions involving expenditure of scarce funds for competing purposes. Smaller average family size will, for example, make relatively more funds available for the building of feeder roads or for irrigation works, since less money will be needed for schools and school fees.

In respect of direct individual incentives, however, as sometimes used and increasingly discussed in connection with family planning, the mission is very doubtful. Two main categories of incentives are involved. One consists of positive monetary incentives, payable to clients or to so-called motivators, who are credited with inducing people to come to the clinics. In the view of the mission, family planning is a valuable service provided by the Government, whereas the incentive schemes just described often give the impression that family planning is a service which the individual is asked to render to the Government and for which he or she may expect a reward. The soundness of such an approach appears questionable. Another category are negative incentives—the withholding of various social services from all children after the third or fourth child, as the case may be. Actual and proposed sanctions of this kind include heavy school fees or denial of certain education opportunities, and loss of maternity leave and tax exemption. Such measures appear to be anti-humanitarian, and there are wide groups of the population to which they are not politically acceptable. Such deterrents also seem likely to increase the existing inequalities in living standards between large and small families. As such they seem to us contrary to the basic objectives of an employment strategy.
Security in old age is an important aspect of family planning in the long term. A large and closely integrated family was the basis of provision for the aged in traditional Kenyan society. There is still great value in the close-knit extended family, and the benefits to the aged are very important. But high birth rates are no longer necessary to achieve this, and in the meantime high birth rates place heavy burdens on the family and society. Moreover, increasing numbers of people, especially urban people, are no longer effective members of such large extended families. The expansion of the national social security scheme to include more people, together with improved administration, can be an effective means of reducing pressure for very high fertility rates. Such action need not constitute a threat to the extended family, which is a valuable institution, any more than family planning need threaten the extended family; and it allows a reduction of the fear and uncertainty with which people contemplate old age, and thus reduces the anxiety to have many children whatever the cost.

In respect of foreign aid, the mission would recommend that its relative abundance be taken advantage of. It is, however, assumed that the use of foreign personnel for direct delivery of family planning services will be discontinued as soon as circumstances permit. The aid resources should be diverted towards general financing of family planning programmes, training of staff, research, equipment, supplies, and help with related health services, and away from direct delivery of services.

We would recommend to donors of aid and Kenyan authorities making requests for aid to ponder the implications of our basic approach, i.e. that family planning should not be a specialised project but should be part of a general improvement of health care, specially for children and mothers, and specifically including preventive health care. We would therefore hope that aid will be as readily available for such health programmes (which may require considerable resources of a local and recurrent nature as well) as it is now for family planning in the narrower sense.¹

¹A special mission paper entitled A population policy for Kenya has been prepared, and submitted to the Government separately.
The question of choice of techniques in the various sectors of the economy is at the heart of a development strategy in which importance is attached to employment and income distribution. In addition to various fiscal measures, variations in techniques can be a major instrument of income redistribution towards the lower income groups of the population. The decisions about what to produce and how to produce what is demanded are obviously crucial: they help to determine how employment will grow in relation to output and how value added in the economy will be distributed among various income groups. This chapter deals with some elements of a technology policy in Kenya, namely criteria for product selection and adaptation, selection of appropriate techniques and correction of factor price distortions, labour-intensive technical change, and research and development in agriculture and industry.

CHOICE OF PRODUCTS

The kind of technology that is used, particularly when effective protection is high, is related to the kind of products that are in demand, the demand in turn being determined by the distribution of income. As noted in the Introduction and Chapter 6, Kenya inherited a certain pattern of output from the colonial system. A number of consumer goods industries were established, of which some though by no means all were essentially intended to meet the requirements of high-income expatriates. These industries co-existed with a structure of small urban and rural industries catering to the relatively limited and different consumption demand of the people. This demand was different in the sense that the types of product which the mass of people wanted or could afford were often different in quality or specification, even though they may have met the same functional needs as those produced by the generally larger enterprises serving the expatriates.
If Western-style goods are included in the pattern of consumption, the economy becomes dependent on Western technologies to produce them. Generally speaking, this implies that goods are produced by capital-intensive techniques, and also that there is rapid technical change (usually involving rising capital intensity) in the methods of production. Over time, goods produced by capital-intensive techniques tend progressively to displace those produced by labour-intensive methods, largely because technical change in capital-intensive methods is greater than in the labour-intensive ones. This is particularly so since in the case of Kenya there are virtually no sources of innovative advance available to the local labour-intensive producers. As Chapters 12 and 13 show, there is considerable ingenuity and scope for innovation in the small-scale labour-intensive sectors, yet present policies are not favourable to developing this potential.

It is difficult for an international mission to be dogmatic about what particular products Kenya should produce. The strategy of redistribution from growth outlined in Chapter 7 would itself have the effect of changing the product mix in favour of local goods consumed by low-income and middle-income groups. How far one should attempt to change the pattern of demand beyond this in order to favour labour-intensive goods is a difficult question. One needs evidence of the feasibility of making fundamentally new products which are labour-intensive, as well as new ways of making existing products, before any firm recommendations can be made.

In advance of such evidence, the mission can only propose some general criteria as the basis for product selection and adaptation, viz—

1. Availability of substitutes or near-substitutes from more labour-intensive industries which perform the same function (e.g. soap as a substitute for new types of detergents).
2. Other possibilities (if any) less costly in total resource use.
3. Possibility of developing alternative products through re-design and development work, e.g. more labour-intensive techniques for wooden furniture. Such new alternatives may be either less costly or more so in total resource use.
4. If the alternative products are less resource-using they may nevertheless be of lower quality. Then the question is whether the loss of quality through using the local alternative is worth the saving of resources. For example, if existing types of paint can be produced at lower unit costs than improved products, but are, for example, more difficult and time-consuming to apply to

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1 Capital intensity here and elsewhere is measured by the ratio of initial investment costs to numbers of jobs created. We examine the question of capital intensity in more detail later: the larger enterprises which produce Western-style goods in Kenya do substitute labour for capital, but even so, the investment-jobs ratio remains high.
surfaces, the question to ask is whether or not the quality loss through use of the existing product is compensated by its lower costs of production and sale price.

Once appropriate products are identified, the promotion of their production and acceptance by the consumers can be undertaken through fiscal measures and by the use of tariffs to discriminate against inappropriate products in cases in which appropriate ones are available. Some cars, for example, are clearly more appropriate than others in relation to Kenyan incomes and conditions. A tariff structure which discriminated heavily in favour of a limited number of cars would permit considerable savings in such matters as stocks of spares and use of skilled mechanics.

The consideration of product mix in choice of techniques is important, since it widens the range of technical choice, in terms of broad industrial categories and of choice of particular products to fulfil general needs. So far, the question of how to produce things has been given more attention than the question of what to produce. The mission believes that this second question deserves as much consideration as the first, especially an inquiry into the extent to which Kenya's product mix can be changed through income redistribution or international trade.

**CHOICE OF TECHNIQUES**

The use of capital-intensive techniques is often justified on the ground that these techniques are more favourable to the growth of output and of employment than labour-intensive ones since they generate larger re-investible surpluses. This argument is based on three major assumptions: first, that capital-intensive techniques generate more savings than labour-intensive techniques; secondly, that the level of savings is the factor limiting investment, and that additional saving will bring about greater investment and output; and thirdly that the rate of growth of employment also rises in line with growth in output. In Kenya there are reasons for doubting the validity of each of these assumptions.

First, there are considerable variations in wage rates according to scale of production, location, and the nationality, skill and sex of employees. If the choice of techniques involves changing the category of workers, the change in the wage bill—and thus the impact on profits and savings—may be substantial. In particular, any activity which involves the use of fewer expatriates may be accompanied by a significant reduction in wage and salary costs. Similarly, shifts from the formal to the informal sector, from wage employment to self-employment and from an urban to a rural location will also involve substantial reductions in wage rates. This may well mean that profits will increase as one moves from capital-intensive techniques into a low-wage sector.
Employment, incomes and equality

Table 37. Outflow of dividends, inflow of investment and retention of profits on foreign equity (all foreign investments), 1967–70

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Outflow of dividends (£ thousands)</td>
<td>4 267</td>
<td>4 127</td>
<td>5 757</td>
<td>8 017</td>
</tr>
<tr>
<td>Net inflows (inflow of new capital minus outflow of dividends, in £ thousands)</td>
<td>1 667</td>
<td>301</td>
<td>390</td>
<td>1 430</td>
</tr>
<tr>
<td>Ratio of foreign profits retained to total profits on foreign equity (percentages)</td>
<td>53</td>
<td>65</td>
<td>54</td>
<td>54</td>
</tr>
</tbody>
</table>

Source: East African Community Secretariat.

Profits are assumed to be the main source of savings, while wages are consumed. In the case of Kenya, it is clear that large private companies using capital-intensive techniques do in fact earn high profits. Yet, since many of them are foreign-owned, a very high proportion of the profits is repatriated instead of being invested in Kenya (see table 37). This would tend to invalidate the assumption that additional savings through capital-intensive techniques bring about greater investment (at least as regards investment within Kenya).

Although the retention rates in Kenya seem to be much higher than in some other developing countries (e.g. in Latin America), over-pricing of intermediate goods and royalty payments from subsidiaries to parent companies may lead to a much larger outflow of resources than the figures on declared profits indicate.¹

In any case, to increase savings through the choice of capital-intensive techniques has several disadvantages. It involves a shift of income towards profits and hence greater present inequality of incomes, which conflicts with the objectives of this report. It also involves a reduction of current employment compared with what it might be if the Government were able to increase savings in other ways. If the desired investment ratio could be achieved, for example, by raising taxes, and not by choice of capital-intensive techniques, it would be possible to have employment both now and later. Hence the adoption of capital-intensive techniques to secure the required savings is not necessarily a desirable policy.

The rapid growth of productivity in Kenya shows that output can increase very rapidly with little effect on employment. In fact, Kenya’s experience illustrates how the adoption of relatively and increasingly capital-intensive techniques may enable investment at a high rate to be devoted almost entirely

¹ For empirical estimates of outflow of resources, see Technical Paper 16, on foreign investment in Kenyan industry. Policy concerning this is discussed in Chapter 11 and in Technical Paper 17.
to increasing the capital per person employed, resulting in a rapid rise in productivity and a very slow rise in employment. This pattern of capital-intensive development is also likely to result in a slower (and possibly negative) subsequent rate of growth of employment, because this type of development involves amounts of capital per head that are not merely high but increasing. But if a labour-intensive alternative were possible under which capital per employee was initially lower and did not increase over time (or increased more slowly than under the capital-intensive alternative), then despite a slower growth in output, faster growth in employment might be possible.

The exposure to the international economy is at least part of the reason why this has not happened in Kenya. It may also have destroyed productive opportunities, actual as well as potential, in local industries, possibly at a higher rate than the capital-intensive investment generated new opportunities. One cannot be precise about this because in Kenya data on the informal sector where many of the local products are made are extremely limited.

Examples can, however, be provided. It would seem that there has been a reduction in the growth potential of artisan shoemakers and shoe repairers as a result of technological changes introduced by the large footwear manufacturers. Soles made of polyvinyl chloride resin or vulcanised rubber have a longer life than those made of leather, but only large-scale producers can afford or justify the heavy investment in the moulding machines required, so there has been a shift in consumer demand away from the small artisan producers using local materials. Nor can it have made life easier for the African producers making cheap sandals from old motor tyres and inner tubes. The bakery industry has also witnessed a rapid expansion in demand for its products as the African higher-income groups have changed their eating habits, switching from traditional cereal foods based on maize and cassava to bread, cakes and biscuits made from wheat flour. Installation of the latest European baking technology (including travelling ovens, pneumatic flour handling, continuous proving, and conveyor-fed slicing and wrapping machines) by the single firm which controls much of the industry must have had some displacement effect on local bakers and on the consumption of the more traditional products.

Efficiency, scale and capital intensity

No clear-cut evidence is available for Kenya to indicate whether labour-intensive techniques in use are often inefficient or not. In the absence of any readily available material, the mission undertook a case study on the choice of techniques in the sealing and packaging processes in the manufacture of cans.¹ This case study is interesting since comparisons could be made between

¹ Technical Paper 7.
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semi-automated and automated methods in a single factory. The unit costs of production per can at market prices for factors were higher with semi-automated than with automated methods. The data also show that labour costs per can were much higher under the semi-automated method than under the automated one. Thus the use of capital-intensive techniques by the entrepreneur was a rational choice in terms of existing market prices for factors. The case study indicated that the shadow price of unskilled labour would have to be very low to make the labour-intensive techniques profitable. More studies on these lines would be needed before one could reach reliable conclusions for general policy.

Nor is there conclusive evidence in Kenya on the relationship between scale and capital intensity, especially in the industrial sector. There is some indication that capital productivity declines as the size of the enterprise and the capital intensity increase. In agriculture, presumably owing to the scarcity of management and supervisory skills, empirical studies show a fall in the gross output per acre, as well as in gross profits, as the average farm size increases. However, a clearer case of economic efficiency in relation to scale is in the distribution sector. Contrary to expectations, it is the smaller and medium-sized rather than the larger establishments that are most efficient in terms of value added in relation to both fixed capital and inventory stocks (see table 38).

In general, farm mechanisation in Kenya at present involves the use of big, heavy tractors suitable mainly for large-scale operations on the large farms. In keeping with the strategy we advocate for agriculture, we would recommend the development of small tractors and farm implements which are more economical for the smaller farms. These would have several advantages: first, the initial cost of investment is much lower than for a large tractor; secondly, expenses on maintenance and repair services are quite low; thirdly, owing to a smaller machine capacity, a larger number of machine units will be required in a given area; and fourthly, the simpler mechanical structure, by

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1 The case study also indicates that to bring about a change in techniques, an employment subsidy to encourage firms to use more labour would have to be a much larger transfer payment than the current investment allowance.
2 See Chapter 10.
3 According to the statistics available, the number of tractors in Kenya declined from 6,422 in 1961 to 5,729 in 1965, and then increased rapidly to 7,246 in 1970 (Statistical abstract, 1971, p. 94). There seems to have been little change in the number of tractors available for each of the large farms. Assuming that all tractors were used on the large farms, the number of tractors per farm increased from 1.8 in 1961 to 2.0 in 1969. Since some of the existing tractors are of course used in the settlement schemes and to some extent on small holdings as well, the tractor ratio per farm may have remained unchanged in the 1960s. Also, in view of the increasing prices of farm machinery and equipment during this period, the rise in the expenditure on mechanical equipment indicates only a moderate increase.
4 See Chapter 10.
Table 38. Capital intensity in the distribution sector, by scale of operation, 1968

<table>
<thead>
<tr>
<th>Size of establishment (No. of workers)</th>
<th>Average ratio of fixed capital to value added</th>
<th>Average ratio of stock to value added</th>
<th>Average amount of fixed capital per worker (£)</th>
<th>Value added per worker (£)</th>
<th>Labour cost per worker (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4</td>
<td>0.18</td>
<td>0.41</td>
<td>258</td>
<td>1 417</td>
<td>568</td>
</tr>
<tr>
<td>5-9</td>
<td>0.62</td>
<td>1.31</td>
<td>534</td>
<td>867</td>
<td>506</td>
</tr>
<tr>
<td>10-14</td>
<td>0.59</td>
<td>1.08</td>
<td>233</td>
<td>398</td>
<td>331</td>
</tr>
<tr>
<td>15-19</td>
<td>0.45</td>
<td>0.96</td>
<td>352</td>
<td>781</td>
<td>385</td>
</tr>
<tr>
<td>20-29</td>
<td>0.39</td>
<td>1.69</td>
<td>534</td>
<td>1 374</td>
<td>767</td>
</tr>
<tr>
<td>30-39</td>
<td>1.25</td>
<td>2.33</td>
<td>1 235</td>
<td>992</td>
<td>640</td>
</tr>
<tr>
<td>40-49</td>
<td>1.12</td>
<td>2.14</td>
<td>1 267</td>
<td>1 128</td>
<td>824</td>
</tr>
<tr>
<td>50-99</td>
<td>1.16</td>
<td>2.02</td>
<td>1 174</td>
<td>1 007</td>
<td>541</td>
</tr>
<tr>
<td>100 and over</td>
<td>0.90</td>
<td>1.20</td>
<td>1 110</td>
<td>1 230</td>
<td>867</td>
</tr>
<tr>
<td>All sizes</td>
<td>0.58</td>
<td>1.12</td>
<td>644</td>
<td>1 108</td>
<td>600</td>
</tr>
</tbody>
</table>


Comparison with that of a large four-wheel tractor, allows the operator and the mechanic to learn how to handle them properly after shorter training periods. The mission therefore recommends a selective approach to farm mechanisation of one or two specific operations such as land cultivation in areas where the soil is extremely hard to cultivate by hand before the onset of the rains, or again for mechanical weeding to remove any seasonal labour bottleneck.

In the distribution sector the rapid growth of population, suburban living outside Nairobi and the existence of a sizeable high-income European and Asian population have resulted in the growth of supermarkets. To the extent to which these shops supersede small ones or check their potential growth, this shift in techniques of retailing will conflict with the strategy of employment expansion and income redistribution in favour of the poor.

Wholesale and retail trading in Kenya extends from hawkers and small traders with no fixed premises to small shops and large supermarkets and self-service shops with fixed premises. Separate information on these different modes of retailing is not available for Kenya. The 1968 census of distribution (not yet published) is the only comprehensive and reliable source of data on distribution, yet it does not investigate the effects of alternative techniques of distribution, e.g. self-service or non-self-service retailing, on productivity and other economic variables.

1 Thus there may well be a case for imposing a tax on the import of large four-wheel tractors, particularly as there is already a large amount of underutilised tractor stock.

2 Although under this census data on fixed capital assets were collected for the first time, it did not provide separate information on the number of employees and the self-employed. However, the latter information was obtained in the 1966 census. Such inconsistencies could be avoided without any cost.
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Table 38 has already illustrated variations in capital intensity by size of firms in the distribution sector as a whole. In terms of ratios of fixed capital and working capital to value added, as well as of the amount of fixed capital per worker, smaller firms show greater labour-intensity than do the larger ones. To the extent that ratios of capital to value added can be used to reflect economic efficiency, there is evidence to suggest that in Kenya the larger firms engaged in distribution (which can be assumed to cover the large supermarkets and wholesale establishments) are not necessarily the most efficient.

Factor price distortions

Wherever efficiency considerations permit, encouragement of medium-sized and small enterprises would promote the introduction of labour-intensive techniques. However, such a switch would require not only the development of new labour-intensive techniques but a relaxation of such constraints as factor price distortions and the scarcity of management and supervisory skills.

The Kenyan investment deduction system makes capital cheaper than it would otherwise be in relation to labour. The manufacturing companies depreciate plant and machinery at 12.5 per cent per annum; in addition, in the first year of operation they may deduct 20 per cent of the value of fixed assets from gross profits before tax. By effectively reducing the cost of capital, these concessions tend to bias investment decisions towards capital-intensive techniques.¹

Although product markets are protected by tariffs, quotas and sometimes a total ban on imports, intermediate goods for processing are often allowed drawbacks and remissions of duty. All capital goods are imported into Kenya duty-free. A policy of removal of factor price distortions would imply that duty rebates and unnecessary under-pricing of capital be stopped.²

The mission’s observations also suggest that the shortage of skilled and supervisory workers is more acute than that of capital—all the more so since capital is subsidised, while skilled labour is not. We considered the possibility of introducing an employment subsidy. However, the fiscal measures and

¹ See Technical Paper 16.
² A policy measure recommended by the National Assembly Select Committee on Unemployment in paragraph 50 of its report already quoted, is that all capital equipment be subject to a basic duty rate of 20 or 30 per cent. This essentially implies raising the price of under-priced capital. However, in the case of road-building equipment, which affects the public sector almost exclusively, this would have to be followed by some kind of unit cost control of the contractors’ tender rates. If the import duty is merely put on top of the unit costs nothing has been achieved. A unit cost control may result in the withdrawal of foreign contractors on which the country is dependent in the short run. In the long run it may help indigenous contractors and the competitiveness of the projects carried out directly by the Ministry of Works. See also Chapter 16.
wages policy which we propose will remove several of the current biases in favour of capital and against labour, so that additional measures may be unnecessary.

The current shortage of skilled workers and supervisors needs to be overcome by training, including training of managers and supervisors. Care is needed to ensure that the execution of the Kenyanisation policy (considered elsewhere in our report) does not make this shortage even more restrictive instead of eliminating it. The shortage of management and supervision is likely to be a major limitation also on the development of Kenyan ownership in large-scale enterprise, and may result in higher levels of capital intensity than might otherwise be the case. Thus the action taken to deal with this shortage seems to us to be of critical importance.

The mission found it encouraging to note during its visits to several enterprises that in spite of these distortions, many large firms (especially foreign ones) use more labour-intensive methods than do others. A can manufacturer used about 30 per cent more labour per unit of output than he would in his home country: however, he ascribed some of this difference to lower labour efficiency. Sometimes, particularly in the assembly of commercial vehicles, the choice of labour-intensive techniques was dictated by problems of scale. Since the Kenyan market for those products is limited, one-off assembly techniques are used, and unit costs and prices are uncompetitive, so that the industry requires considerable protection. In this case, the plant and equipment had been reduced to a bare minimum (a large number of simple hand tools, and a single one-off paint-spraying machine).

It is clear, however, that labour-intensive techniques are also used in operations where scale might allow mechanisation, in activities like materials handling (e.g. unloading lacquered tinplate from ovens). A particularly interesting substitution of labour for capital has taken place in one factory, in the printing of fabrics. Originally, the firm introduced semi-automatic printing methods which require long horizontal metal benches and travelling printing frames made of heavy metal. The firm then found that the operation was very expensive, mainly because of labour inefficiency which resulted in a high error rate and increased supervision costs. It shifted to hand-printing techniques, using very simple wooden easels (about 30 yards long) and a wooden printing frame which a single operative can handle. It found that the labour-intensive technique was more economic under Kenyan conditions, in spite of the overhead costs of underutilised semi-automatic machinery.

It appears from the above examples that in the Kenyan private sector, factor proportions tend to respond to changes in relative factor prices. Thus, a

1 See Chapter 16.
policy of correction of factor price distortions (through import tariffs on capital goods and abolition of investment deductions, as recommended in Chapter 16) offers scope for greater use of labour-intensive techniques. In particular, the factor proportions in ancillary operations in industry, agriculture and construction are likely to be changed as a result of such a policy.

On the other hand, it does not seem that any attempts have been made to check the use of very capital-intensive techniques in public construction. There has been a continued mechanisation of construction operations as a result of adherence to unrealistic standards and designs for building and other construction and the lack of scientific project appraisal on the basis of shadow instead of market prices. In the case of road construction under the Special Rural Development Programme, in at least two instances heavy equipment was hired from private contractors to build roads speedily to what may be unnecessarily high standards and specifications. Another indication of the trend towards mechanisation in public construction is the equipment for which funds were provided by the World Bank, and which includes 65 tractor-mounted rotary grass cutters, presumably for cutting the grass on the edge of highways. This operation is traditionally done by gangmen with pangas. Yet another item is a total of 11 road chip spreaders which would also put traditional hand labour out of jobs.

Project evaluation is often made on narrow economic and budgetary premises. The social benefits of employment as such, the abundance of labour and the possible scarcity of capital are not usually taken into account systematically in the preparation of road projects. Some sort of shadow pricing which could be made to reflect the social needs and the real scarcity of resources province by province needs to be politically accepted and introduced into project planning and evaluation not only in the Ministry of Finance and Planning but in the operational ministries as well. The immediate financial consequences should be fully accepted also, of course, and this is probably the most serious obstacle. At least a part of the financing of labour-intensive methods could be done through the World Food Programme.

In the report of the Select Committee on Unemployment a case study is quoted in which alternative methods of road construction are analysed. The Committee concludes that given a certain amount of savings in foreign exchange and a simultaneous relatively high employment effect, a 10 per cent higher construction cost for a labour-intensive method is acceptable. This proposition is fully endorsed. But would an even higher cost also be acceptable? It is necessary to investigate how large an increase in employment justifies a

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particular increase in construction cost. In other words, the concept of shadow price needs to be introduced into project evaluation.¹

LABOUR-INTENSIVE TECHNICAL CHANGE

The usefulness of any technology policy for increasing labour intensity in the economy is apt to be eroded by international technological advance, unless policies on choice of techniques are supported by policies to stimulate technological change at the labour-intensive end of the technical spectrum. A policy which induces a shift along a static spectrum of choices is by itself insufficient, because of the technical advance in capital-intensive methods; a policy for technological change is needed as well. This means that there must be an ability to generate relevant technical change in Kenya itself.

Some forms of agricultural technology, such as irrigation, fertilisers and pesticides, as well as many forms of improved farm practices such as mulching, pruning and early planting, increase both output and employment. Other forms reduce employment—for instance herbicides that are a substitute for manual weeding. However, many forms of technology and farm practice vary in their employment effect according to the circumstances in which they are used. In situations of extreme seasonal labour scarcity, herbicides may be an economically efficient method of weeding, and their use may lead to an increase in the crop area, if there is available land, or to a higher yield and hence a higher demand for labour for the remaining operations or a higher income from the crop.

Our recommendation about the use of relatively simpler agricultural inputs, e.g. small tractors, ploughs, sprayers and seed distributors, implies their availability in Kenya. We believe that it is within the capacity of the Kenyan economy, or at least the East African Community, to produce these tools and implements locally. Domestic production is therefore justified.

It is obvious that the Kenyan economy will remain dependent on imported plant and equipment for a long time, but there are technological reasons for which this dependence should be reduced. In the first place, if Kenya has some machinery-fabricating industries, they can assist considerably in the so-called “development phase” of innovatory research. At some point, laboratory research findings have to be translated into machines and processes. Sometimes the process will be technically too complex and beyond the skills of Kenyan firms, but when the equipment is relatively simple (and quite a lot of labour-intensive machinery is likely to be so), it should be possible to build

¹ See Technical Paper 8.
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up local ability to fabricate prototypes. Secondly, the adaptation of plant and equipment from advanced countries—and the copying of appropriate equipment—depends upon there being at least a rudimentary capital goods sector. There is already some copying and adaptation of machines in Kenya: for example, the engineering workshops on the Nairobi Industrial Estate have been able to copy and adapt imported assembly machinery for the small firms on the estate, though only to a very limited extent.

This is not to suggest that there are no difficulties in the establishment of economic capital goods industries in the short run. Scale is an obvious limitation, particularly for types of equipment which are mass-produced in the advanced countries, e.g. electric motors and other small power units, and many small machine components, including high-precision nuts and bolts. For example, until a few years ago, the East African railway workshops imported virtually all spares for steam locomotives, because local fabricating costs were considerably higher than unit costs in the mass-production shops in the United Kingdom. Recently, the railway workshops have started manufacturing a number of steam locomotive spares (e.g. connecting rods, lubricating systems) because steam locomotive spares are no longer mass-produced in the United Kingdom but are manufactured to special order only. This has made it economic to manufacture in Kenya (it has also increased the capital costs of locomotive transport, and diminished the economically useful working life of the steam engine).

There is also a structural obstacle to building up a capital goods sector in an economy in which large foreign companies predominate in the consumer goods and intermediate sectors. Objective economic factors push the companies to import supplies from their established home base. It is less risky to do so than to use inexperienced local engineering firms, even for simple spare parts, and even when local firms may be competitive. And if the home-based company has fabricating facilities of its own that are under-utilised, the foreign subsidiary in Kenya will be under considerable pressure to use them, even if local parts are available at low cost. More generally, a restructuring of relative prices and tariff policies, as recommended in Chapter 11, could be expected to have a major impact on the desirable development of local capital goods production.

Another limitation is the lack of skills in Kenya and the uncertain position of the skilled Asian craftsmen in the capital goods sector as it exists at present. The manufacture of machinery and spare parts is not necessarily a capital-intensive activity, but it is often highly skill-intensive.¹

¹ At present, a good deal of the available skilled work force is Asian, particularly in the smaller privately owned metal-working shops. This fact sets a problem for Kenyanisation policy—to give Africans access to learning by doing and preserve for the needs of the country
Notwithstanding the above short-term constraints, it should be possible over the longer term, and in selected areas, to re-direct the existing capacity towards the production of machinery and parts for labour-intensive agriculture and industry in Kenya (and elsewhere in eastern Africa). An important practical step would be to make a more systematic use of the railway workshops as a training ground for skilled technicians, supervisors, and junior managers, and to create openings for the trainees in local labour-intensive enterprises, both rural and urban.

It should also be borne in mind that labour-intensive technical change in Kenya cannot be brought about in a vacuum. The prerequisite for such a change is an allocation of adequate resources to research and development. In view of its importance, a separate section is devoted to the subject.

RESEARCH AND DEVELOPMENT

Agriculture

In agriculture, biological innovations such as high-yielding seed varieties, as well as fertilisers, herbicides, pesticides and improved farm tools and implements, come from research stations in Kenya and elsewhere in East Africa. It is therefore pertinent to ask: how do they set their research priorities and identify farmers' research needs? How are the results of research communicated to farmers? How closely are the research stations tied to the extension service?

The typical Kenyan government research station has several problems, viz:

(1) Its research base is still very limited, as may be seen from the way research resources are distributed over geographical areas and between small and large farms, and from the choice and priority listing of technical problems.

(2) It is still regarded by most farmers as an ivory tower and a fancy government shamba. Research stations are normally big institutions very much removed from the concept of testing centres.

(3) The processing, translation and dissemination of research findings is directed at more educated people than are found on small farms. There is a high propensity to use scientific journals, conferences and poorly interpreted field displays at shows or on research stations. In Kenya agricultural shows, one often sees only 40-hp or 60-hp tractors, large planters, big ploughs, and so forth.

(4) Research itself is concentrated on crops such as pyrethrum, tea, coffee, sugar and wheat, which are grown in limited geographical areas, and tends to neglect crops like sweet potatoes, beans, local maize and castor beans.

the reservoir of skill represented in the Asian community. This is yet another sign of the importance of constructive Kenyanisation policies for safeguarding and increasing employment.
Many attempts have been made in the past in several countries to test out the results of research stations under local farming conditions. This is a highly desirable stage in research dissemination but most of those trial management farms or testing centres tend to end up as glorified demonstration farms. It is recommended that a further attempt be made to set up such testing farms in different ecological zones and with different farming systems. They should be directed by people with the temperament and training to keep in close touch with actual farming conditions in the area, and the directors should have specific instructions to do so.

In the past, agricultural research has been mainly concentrated on cash crops and stock for the large farms and estates and the high-potential areas. While much of the research effort was extremely successful in those respects, small-scale farmers, the subsistence sector, food crops except for maize and the medium-potential areas (except for cattle) have been relatively neglected. This neglect has not been without cost to the country, for much of the expenditure on famine relief might have been avoided if more research had been conducted on appropriate farming systems for drought-prone areas.

For the future, the need to double food production from smaller holdings by 1985 will require a reconsideration of research priorities and research effort and organisation, with a major thrust directed to research on crops and stock for small farms. If hybrid maize has its desired effect in reducing the area which the individual farmer must devote to food crops, it will be essential to consider what other crops or livestock can be incorporated into a very small farming system. This will require intensification of agricultural and economic research aimed at making the small and very small farms more productive and profitable by giving high priority to horticulture, pulses, stall-fed animals, pigs and poultry, pasture improvement, fodder, fishponds, bee-keeping, cheap and simple methods of controlling pests and diseases and appropriate forms of small farm mechanisation.

The rapid increase in population will lead people to migrate into the semi-arid and medium-potential areas. Specific research that might be covered by research stations to be situated in these areas includes the following:

(1) Research on soil management and the ecology of particular areas to determine techniques for utilising the land and water on a sustained basis for agriculture and stock raising while conserving the natural resource on which these activities depend.

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1 Within East Africa as a whole, the bias in research towards the large farmer was less serious. Research included important programmes such as East African research on sorghum and soya beans, successful earlier work on mosaic disease of cassava and rosette disease of groundnuts, and research at Makerere in Uganda on pigeon peas, cow peas and blight-resistant potatoes.
(2) Development of drought-resistant or drought-evading (quick-growing) crops for particular areas, including short-staple cotton, short-term sorghum and millets for the areas too dry for Katumani maize, short-term or drought-resistant legumes (e.g. chick peas, pigeon peas and dwarf beans), castor beans and cassava.

(3) Continued research on pasture and fodder improvement.

(4) Research on economic crops for irrigation schemes and the optimum use of water in irrigation areas where the amount of water available is likely to be the limiting factor.

This will require a considerable intensification in the existing research programme. The matter is of sufficient urgency to justify us in recommending the appointment of a capable and experienced team of agricultural and social scientists to study the areas in question and their research needs and to advise the Government on action to be taken. For this research to be of benefit there must be much better co-ordination between the research and extension services. The research information section of the Ministry of Agriculture needs to be considerably strengthened to ensure the effective dissemination of research results to the extension service and to keep the research services advised of research needs identified by extension workers.

Research and development in the field of farm mechanisation has been rather limited in the past. There is a small unit for the testing of farm machinery at Nakuru, but its impact is limited since it cannot publish its findings without the agreement of the manufacturers of the machines concerned. The recommendation of the Havelock report that “it should be a pre-condition of entry into the Kenya market that agricultural machinery of new types and models should be tested by the unit” should be implemented without delay.

If our recommendation on the introduction and promotion of small tractors and farm implements were accepted, it would be highly desirable to follow up with research and development of prototypes. We were told that within East Africa, attempts have already been made to design a small 8-hp tractor—the Makerere mini-tractor or Boshoff tractor—to suit local smallholders.

Government policy towards research on farm mechanisation should give a high priority to identifying the use and possible local production of the small tractor. The farm mechanisation research centre at Nakuru needs to be considerably expanded in the direction of research on the available machinery, designing of prototypes of new machinery and dissemination of research findings.

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A very careful investigation should also be made of farm implements that are rural craft products. These have been neglected so far, although the small blacksmith's workshop could be a potential source of suitable farm implements.

Industry

Turning from agriculture to industry, we find that there is little research done in industrial enterprises in Kenya. The foreign-owned enterprises which predominate in the formal sector rely on research by their parent companies. They also rely on parent companies and foreign engineering enterprises for other types of technical service, such as machine and plant design. This does not mean, however, that expatriate enterprises do not adapt products and processes for the Kenyan market.¹

Typically, however, these enterprises limit their local technical activities to the provision of after-sales services and workshops for critical repairs, and rely on parent enterprises for the rest. This preference for centralised research and development abroad is very strong, and by no means unique to companies operating in Kenya. One local company with its own research facilities had them removed after being taken over by a large foreign group. The main exception to the rule are companies which produce agricultural chemical inputs, veterinary products and the like, which are to some extent environment-specific, and companies which need advanced quality control facilities as an integral part of the production process.

The amount of applied industrial research outside private enterprises is also small. It is concentrated mainly in the East African Industrial Research Organisation, the engineering faculties of the University of Nairobi, and to a smaller extent the Kenya Polytechnic in Nairobi.²

A rough estimate of research and development expenditure by these institutions suggests that it might amount to about £120,000 a year. Private enterprises may spend a further £100,000 on local research and development for industry (and possibly as much again for agriculture). Applied industrial research expenditure is therefore less than 0.2 per cent of the value of manufacturing output. This is a very low proportion as compared with that prevailing in small advanced countries, but about average for developing countries. It is possible, however, that these estimates are on the high side.

¹ An example of product adaptation is the development of specially strong bodywork for large commercial vehicles, particularly buses, to withstand the high torque which can occur on Kenyan road surfaces.

² For a survey of the existing research facilities in these institutions, see Technical Paper 9, on industrial research and engineering facilities in Kenya.
There is also a general bias in research and engineering education towards the large-scale enterprises and towards the government technical departments. This is hardly surprising because at present these are the only sectors where there are career opportunities for engineers and technicians. However, there have been research projects, particularly at the East African Industrial Research Organisation, which do not reflect this bias and which relate to the small production units in industry and agriculture.

As regards research and development policy, there are some immediate steps which could be taken. The first of these is to set the Research Organisation free from some of the restrictions under which it operates, and to direct further research in the Organisation towards labour-intensive technologies for the informal sector. The Organisation must be free to initiate projects, and to do this effectively it requires a much larger core of permanent research workers who are not only free to tour small-scale and rural industries but are positively required to do so.

It should be quite feasible to increase the budget of the Research Organisation threefold in the next five years, to an annual expenditure of £225,000 in East Africa itself, and to support this expansion with greatly expanded training programmes for East African researchers both in the Organisation and abroad. This should be done in addition to developing sponsored research projects in relevant fields, so that the total revenue might expand considerably more than threefold, possibly to about £300,000 by 1977. The main emphasis of the increased programme of the Research Organisation should be a programme concerning technology for rural and small-scale industries. Such a programme can only be based on a thorough technical survey of these industries, and particularly of the fabrication capabilities that exist in the smaller industries in East Africa. Any such programme should be linked directly to the institutions that will grow up around new industrialisation programmes—e.g. industrial estates, rural industrial development centres, industrial extension systems and the like.

A second opportunity for immediate action in Kenya is in the proposed centre for engineering research and design which is at present being examined by UNDP and UNIDO. The centre is conceived of as a source of supply of new design and research skills for the engineering fabrication industries, and to provide relevant design and research opportunities for undergraduate and postgraduate engineers. It is intended that the centre should concern itself with new types of innovation of the labour-intensive kind. We suggest that the centre should not be too closely linked at present to the existing system of engineering education, but should be developed as a “think-tank” and research centre for brain-washing engineers, research scientists and technicians into more unconventional approaches to innovation.
Thirdly, it should be possible for the University of Nairobi, together with other East African universities and those in other developing countries, to break away from the existing institutes of engineering, and to set up new professional associations. There is no reason why Kenyan engineers should not take an initiative of this kind, which would be mainly designed to generate new and relevant criteria (not less demanding ones) for the engineering profession in developing countries.

The fourth recommendation is about curricula for training engineers. Curriculum reform is going to be an evolutionary process; it is one thing to detect irrelevant biases in the curriculum (and the university staff concerned are well aware of them), but quite another to re-design courses towards more relevant objectives. The relevant objectives cannot be introduced into course work for undergraduates without some accumulation of research and design experience. The obvious first step is to decide, in principle, that externally determined curricula—University of London and City and Guilds—will no longer be accepted as a constraint.

On the international scene, Kenya has a strong interest in supporting current endeavours to re-direct the technological capacity of developed countries towards giving higher priority to research and development for labour-intensive and smaller-scale production, as proposed in the United Nations World Plan of Action for the Application of Science and Technology to Developing Countries. However, Kenya cannot bear the entire burden of developing its own appropriate technologies. There will be economies of scale that can be made if the task is undertaken within the larger grouping of the East African Community. It would be even more economical if other African countries which are not members of the Community join in a co-operative effort to search for technologies more suited to the African factor endowment.

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1 City and Guilds certificates were the main standards for trade and technical qualifications in England until the establishment of the industrial training boards under the Industrial Training Act, 1964.

The agricultural sector faces a multiple challenge. As shown in previous chapters, nearly all the poorest people in Kenya are to be found in the rural areas. Their only sources of income are output from very small holdings or employment at very low wages. To increase their income from a limited area of land, output per unit of area must be increased. This needs to be achieved, moreover, while the rural population is increasing at around 2.7 per cent a year. Depending on the rates of population growth and urbanisation, about 2.8 million households will be living in the rural areas in 1985, as compared with 1.7 million in 1969.

Within the agricultural sector, food production will have to grow by more than 5 per cent per annum simply to satisfy the extra domestic demand generated by the rapid increase in population and rising incomes per head. The demand for food for the urban population will be increasing by more than 10 per cent per annum, and this will place considerable strains on the marketing system. The demand for many individual foodstuffs will grow at rates above 5 per cent per annum. Kenyan agriculture needs to meet this domestic demand for food, and at the same time make a big and rising contribution to keeping industry supplied with materials and to satisfying Kenya’s foreign exchange needs.

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1 See Chapter 7.
2 The projected average annual rate of growth is under 4 per cent for maize, millet, sorghum and starch roots, between 4 and 7 per cent for fruit, milk, pig meat, rice, vegetables and wheat, and over 7 per cent for beef, eggs, fish, mutton, poultry meats, sugar and vegetable oils. The income elasticities of demand taken from Food and Agriculture Organization: Agricultural commodity projections, 1970-80, are roughly confirmed by elasticities based on household budget surveys for the rural area of the Central Province and the main towns. These estimates make no allowance for redistribution of income. A growth of population of 3.5 per cent and of total personal consumption at 6 per cent is assumed. This is on the assumption of a domestic product growth rate of 7 per cent, because growth of at least 7 per cent in investment and government current expenditure is implied by the measures indicated in the present report.
needs, both by exports and by keeping Kenya self-sufficient in as many products as possible.

Whether one approaches the task from the angle of raising rural incomes and providing increased employment opportunities or of meeting increasing demand, an agricultural growth rate of 6 per cent a year is needed, in comparison with a (not discreditable) rate of apparently between 4 and 5 per cent in the period 1964-70. To achieve this acceleration while directing more opportunities and resources to the poorer, more backward, farmers is the challenge in this sector.

THE OVER-ALL STRATEGY

The over-all strategy proposed to meet this challenge has three main thrusts:

(1) The intensification of land use for both crop and livestock production through the improvement of farming techniques and practices on all farms to raise over-all incomes and employment in agriculture. This intensification of land use must be associated with a concentrated effort to raise the standard of living of the poorer families in relation to those of the community as a whole.

(2) The redistribution of land into smaller, more labour-intensive farm units.

(3) The settlement of unused or underutilised land in both the high-potential and the semi-arid areas.

IMPROVEMENT OF FARMING METHODS

Many of the working poor in the rural areas have land and use it badly. Most small farmers lack at least some of the requirements for productive and intensive farming. However, given the relevant technology coupled with training, credit, access to the necessary inputs (including water), appropriate pricing policies for purchased inputs and agricultural commodities and assured access to markets, there are a wide variety of farming systems by which 1 hectare or less could provide a family with sufficient food and also supply a cash income for purchasing at least the necessities of life. After all, 1 hectare is more than many prosperous farmers possess in other parts of the world. Horticultural and market garden crops, tea, coffee, stall-fed dairy cattle, pigs, poultry, potatoes and pyrethrum could all form the basis of a viable small farm system if they were grown at a level consistent with even the current state of technical knowledge.

1 See Chapter 9.
While it is true that viable small farm systems are available today, the need to double food production by 1985 from smaller-sized holdings will require an intensification of agricultural and economic research with the aim of making the small and very small farms more productive and profitable. In particular, research is needed on the problems of managing small farms in real life, namely the need to produce food crops and a cash income with a shortage of capital, and with the several claims on a woman’s time in a household. This research is needed not only in the high-potential areas but also in the semi-arid areas that are experiencing a rapid population increase due to migration from areas of severe land shortage. 1

Extension services

In the past greater attention has been paid by extension staff to the big progressive farmers, and there has been a tendency to neglect the smaller, less responsive and less progressive farmers. Moreover, a few years ago it was deliberate policy not to give advice to women farmers, even though it was known that a very large number of small holdings in Kenya were worked and possibly managed entirely by women, most obviously when the husband and other male members of the household were in town. This bias arose in part from the assumption that male farmers and farmers with larger holdings were more likely to respond to extension advice. To the best of our knowledge, this assumption has not been proved. In any case, however, under a strategy directed at small farmers, methods of extension will have to be altered, substantially more emphasis being placed on group and mass extension techniques instead of on approaches to the individual farmer, which has been the main method used in extension work in the past. We are pleased to note that women are already being trained as extension officers.

A great deal of experimentation will be required before truly effective methods of group extension work and farmer training can be devised, and it is therefore encouraging to note that experiments have in fact already begun. 2 Under this particular approach farmers will be grouped according to their “progressiveness”. Courses at the local farmer training centre will be introduced for each category of farmer. Membership of groups for future courses will be based on the success of farmers in assimilating the content of the previous course. It is expected that a farmer training centre with a capacity

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1 See Chapter 9.  
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for 100 people could in this way provide courses for at least 3,000 farmers a year. An alternative approach would be to select either the poorest farmers or farmers who have not received extension advice in the past, and to give them priority in courses at the centres. If this proved to be successful on an experimental basis, it could then be expanded to become a cornerstone of a programme covering three to five years and designed to raise the living standards of the poorest farmers in the country.

It must not be imagined that either of these strategies could provide a final answer to the extension problem; a continuous investigation of different extension methods will be required over the next few years. At present there are only 32 farmer training centres and so the potential output of these programmes, if extended to all the centres, is only 96,000 farmers a year. Even if the programmes are fully used, it could take more than 12 years to cover the 1.2 million farmers in the country. In addition, much needs to be done to put the centres on a sound footing if they are to play an effective part in an over-all strategy. At the moment the centres come nominally under the training division of the Ministry of Agriculture, but they are used by the extension staff, who do not belong to that division. The financial situation is chaotic. The funds from which the centres' costs are to be met are included in a lump-sum allocation made to each district agricultural officer, the amount actually allocated being at the discretion of the individual officer in the light of his other commitments. It is small wonder, therefore, that two or three centres remained closed for the whole of 1971, and that several others were seriously underutilised. It is also indicative of the present situation that in 1971 there were 12 changes in the post of principal in the 27 centres operating, while at other levels many inexperienced staff, few of whom had received any training in research methods, were posted to the centres direct from college or institutes. It is strongly recommended that the whole financial position of the centres be thoroughly investigated, together with their organisation, to ensure that all the centres are fully used, and that a corps of professional agricultural trainers should be built up, attached to the training division and not subject to transfer elsewhere.

In a country with a fair amount of illiteracy and inadequate mass communication, extension workers are likely to remain a major source of information on new farming techniques and practices for many years to come. However, their use is expensive in terms both of finance and of scarce manpower. At the moment there is one trained extension worker (agricultural assistant or similar grade) to every 700 farmers—a higher ratio than in most other countries. Ensuring a more effective extension effort is therefore a matter of improving quality rather than quantity. The main effort should be directed at improving the efficiency of the present extension service by reforming its organisation,
improving the quality of extension workers¹ and redirecting its efforts to
achieve much more effective and widespread contact with the bulk of the
farmers. We know that the Ministry of Agriculture is well aware of these needs,
but as far as we can ascertain it has failed to implement many of the valuable
recommendations suggested in the past two years (including those of an
internal working party), even though they were approved in principle by the
Ministry. We strongly recommend that these recommendations should now
be implemented as a matter of the utmost priority.

At the moment insufficient attention is being paid to preventing individuals
from engaging in activities that are detrimental to the community in general.
For instance, there is the continuing problem of soil erosion, which has reached
alarming proportions, particularly in the semi-arid areas that must in future
support increasing numbers of people and stock. Several reports tell of streams
drying up, cultivation on river banks leading to silting of streams and dams,
unchecked gullying of cultivated slopes, sheet erosion following bad grazing
practices, and so on. The same applies to many pests and diseases which can
be kept under effective control if tackled by individuals² but which can cause
big crop and stock losses if uncontrolled. To a large extent, accelerated land
consolidation, registration and settlement and other inducements to better
farming could all help to ease the pressure that leads to poor land use and soil
erosion. However, such measures are only a partial remedy, and if these
practices continue, Kenya’s ability to provide for its increasing popula-
tion will be seriously jeopardised. Most of these practices are covered by legis-
lation, but the laws tend not to be enforced, for understandable reasons: the
extension services of the Ministry of Agriculture regard these regulatory func-
tions as being incompatible with their teaching and advisory function and avoid
taking action, while popularly elected leaders do not want to jeopardise their
chances of re-election by being too severe on their constituents.

Under the present organisation of agricultural field services probably
little improvement is possible. What is needed is a staff of “rural guards”
completely separate from the extension service and from the Ministry of
Agriculture. The role of the rural guards could be to persuade and warn
farmers to obey the regulations, and if necessary to prosecute. The reasons for
insisting on the separation of “rural guards” from the extension service is to
remove any stigma of compulsion from the extension service, and to allow it to
concentrate entirely on advising farmers instead of controlling them. As a
start, perhaps about 500 rural guards would be required, together with some

¹ See Technical Paper 13.
² Of course, there are some pests, e.g. tsetse fly, which normally require collective action
for their control.
50 senior rural guards to act as supervisors. Such rural guards need not be of a high educational standard, but they must, of course, be men of courage and integrity. Appropriate people might be selected from the junior agricultural assistant grade or equivalent ranks in the Ministry of Agriculture who are experienced in field work among farmers but unlikely to benefit from in-service training or to be promoted to higher levels in the Ministry. Senior guards could be selected from the agricultural assistant or equivalent grade on the same principles as have just been indicated for the selection of ordinary rural guards from among junior agricultural assistants.

Credit

It is frequently argued that a shortage of working capital or seasonal credit is a serious hindrance to the adoption of new technologies and farming practices that require either purchased inputs or hired labour. The three types of cases in which such a shortage is most likely to be restricting agricultural development are—

(a) cases in which the farmer, lacking purchased inputs, is unable to generate domestic savings; for instance, a farmer with a large family and less than 1 hectare of land may find that any additional food crops he produces are immediately eaten by the family;

(b) cases in which the purchased input or development item is available only in a relatively large indivisible quantity; for instance, to a very small farmer, the purchase of a 50 kg bag of fertiliser for 50 to 80 sh. may be beyond his means; similarly, for a richer farmer, the fact that a grade cow costs 1,400 sh. may appear an insurmountable barrier to development;

(c) cases in which there is a long period between investment and the beginning of a cash flow from the investment, e.g. it takes four years before there is any measurable return from tea.

We recommend that the Government’s resources available for credit should be increasingly concentrated on these three types of cases instead of on the biggest farmers, as at the moment. We have been told that the total supply of agricultural credit to farmers is improving fairly rapidly, and that a future programme has been devised for the Agricultural Finance Corporation which should strengthen its management control and lead to a considerable expansion in its operations. Much more could still be done, however, to raise the Corporation’s status as the key farm credit organisation responsible for promoting closer liaison with the Co-operative Bank, semi-public bodies and commercial banks, so that at least indirectly it could provide more assistance to small farmers. The Corporation’s policy of dealing mainly with big farmers may maximise the amount of credit extended with a given amount of administrative
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staff; but if commercial banks could be encouraged¹ to play a more active role in the short-term financing of the bigger farmers, perhaps in co-operation with the Corporation, the administrative burden on the Corporation would be eased and it could thus extend its direct lending activities to the smaller farmers.

The major difficulties in devising any programme to extend credit to the smallest farmers are the tremendous administrative problems encountered in advancing a large number of comparatively small loans, and the even greater administrative problems of collecting repayments afterwards. Sums of about 100 sh. to 500 sh. will be needed to buy seeds, fertilisers, insecticides and other inputs. A recent and welcome step to overcome this difficulty has been the initial success of the Co-operative Production Credit Scheme under which seasonal credit is channelled to smallholders through a network of co-operative societies. The rate of expansion of this scheme will ultimately be limited by the extent of a sound co-operative structure throughout the country. At the moment the strongest co-operatives are in the Central and Eastern Province coffee zone, and it will probably be difficult, even in the medium term, to establish successful co-operatives in areas where at the moment only low-income seasonal crops are grown. Moreover, even in areas served by co-operatives there is probably a substantial number of farmers who for one reason or another grow no cash crops, or do not grow the cash crops that are marketed by their local co-operative societies. This means that the majority of smallholders will have no access to agricultural credit under present programmes.

In the last year or so, several suggestions for smallholder credit have been made, and at least one (the Special Rural Development Programme Vihiga maize project) has been tested. There are some elements common to all the suggestions. First, all proposals would closely link the provision of credit and extension advice. Secondly, most would rely on some form of intermediary between the credit agency and the farmer to increase the number of loans handled by each full-time loan officer in order to widen the net of credit and also to reduce the administrative cost of each individual loan. Thirdly, all would provide credit in kind and not in cash. There is now a very strong case for testing and evaluating these various proposals (and others) under field conditions in various parts of the country, so that as more resources become available a nation-wide credit programme can be developed, eventually reaching all the farmers who are hindered from developing their farming systems by a shortage of credit.

¹ This could be done very effectively if the Central Bank required commercial banks to extend specific fractions of their loans to rural districts or to the agricultural sector.
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Supply of inputs

Another limitation on the adoption of new technologies and farm practices on the small farms is the high cost or the total unavailability of agricultural inputs. These issues were considered in some detail in 1971 by the working party on agricultural inputs which made many recommendations, some of which have since been implemented by the appropriate authorities, for improving this situation. Any changes which reduce the costs of agricultural inputs are obviously to be welcomed, but the use of agricultural subsidies and taxes has to be treated with some caution because they can sometimes have adverse effects on income equality, employment and relative factor prices.

However, there are many cases in which a temporary subsidy can usefully be granted to accelerate the adoption of an innovation, especially when the recipients are mainly those just adopting techniques that are new to them in any event. Such subsidies should be most beneficial for the poorest farmers, who in the absence of a temporary subsidy might be unable to adopt a new technique which would improve their family’s standard of living.

In accordance with this principle, it is recommended that the present fertiliser subsidy in Kenya should be phased out over a period of years, since it is mainly the largest farms and estates that benefit from the present scheme.

Three other kinds of fertiliser subsidy might, however, be considered, viz.—

(a) a temporary subsidy to retailers to encourage them to stock fertilisers, as recommended by the working party on agricultural inputs;

(b) a temporary subsidy to cover the extra costs of repackaging fertilisers in sizes more suited to the small farmers, e.g. packages containing sufficient fertiliser for 0.5 hectare or even 0.25 hectare of hybrid maize; or

(c) subsidised fertiliser to be provided along with hybrid maize seed for farmers who successfully complete intensive training courses, e.g. those to be run as part of the Tetu Special Rural Development Programme.

Other temporary subsidies could be specifically directed to particular parts of the country. Possible examples of these would be subsidies on the use of improved seeds in marginal rainfall areas, and subsidised chemicals for cattle dips in the pastoral areas.

Price policy

Another important way in which the Government can assist agricultural development is by raising the producer price of agricultural commodities so

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2 See Technical Paper 14 and Chapter 16.
that farmers have an increased incentive to invest in agriculture and adopt new
techniques. This is recognised by the Government, and in the past year or so
the prices of several commodities such as maize, milk, sugar, beef and cotton
have been raised. There are limitations on the extent to which further increases
can be made. Some of the most important commodities, such as coffee, tea,
sisal and pyrethrum, are mainly export products, and their prices are determined
by world supply and demand; raising their prices above world levels would
call for huge government subsidies, and would present problems of disposal for
commodities such as coffee that are subject to international commodity
agreements. However, the domestic price of those commodities could be raised
by a devaluation of the Kenyan currency.

For agricultural products which are largely domestically consumed, such
as wheat, maize, sugar, milk, livestock and dairy products, fruits and vegetables,
a number of prices are fixed by the Government, and they have generally tended
to be above export parity prices except in the case of beef. Even for these prod-
ucts, there are drawbacks to using price policy to raise agricultural incomes.
In the first place, if the prices are seriously out of line with those resulting from
market forces, they are bound to result in a misallocation of resources. Secondly,
as with the export products, the major beneficiaries of such policies under
present conditions will be big farmers and the better-off smallholders; they
will do very little to raise the incomes of the really poor smallholders. Thirdly,
fixed prices raise the problem of disposal of surplus products, and hence
involve increasing subsidies from the Government. Finally, since these goods
form a higher production of the expenditure of poor households both in urban
and in rural areas, the poor will be the hardest hit by high food prices. This in
turn may lead to demands for higher wages by organised workers, with a
detrimental effect on any incomes and wages policy.¹

It seems better to increase return to producers by improvements in marketing
and reductions in transport costs through the construction of feeder roads and
the linking of remote areas with the main marketing centres.² Nevertheless,
there are individual products, such as beef, for which price increases appear
to be justified on economic grounds.

Marketing

There are frequent and justified demands for improvement in the market-
ing system in Kenya. In particular there is a need to reduce marketing costs,
and to remove many of the petty restrictions which hinder the development

¹ See Chapter 16.
² See Chapter 19.
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of the informal marketing systems. High marketing costs arise in many different ways. Many co-operative societies marketing, for instance, coffee, pyrethrum and milk, are inefficiently managed and have a low turnover, so that a large proportion of the producer's gross return is deducted to meet the societies' overhead expenses. Similarly, many marketing boards and statutory organisations do not pay sufficient attention to reducing their cost to a minimum so that the price they pay the producers shall be as high as is possible while being consistent with maintaining a balance between supply and demand. There would also appear to be a large degree of arbitrariness in the way in which county councils and other authorities levy excise duties on various types of agricultural produce marketed through different channels, and this may have an effect on the efficiency of the marketing system, either by distorting the relative prices of different commodities or by encouraging producers to avoid certain marketing channels.

At the same time there are still many statutory controls restricting the development of an efficient marketing system geared to the needs of Kenya today. The present controls on local marketing, under which maize—the basic food and cash crop—cannot be freely moved from place to place without permission, mean that a strong and healthy marketing network run by enterprising Africans has been effectively stifled.

These arrangements date in large part from the system established before independence, in quite different circumstances. It is time that they were thoroughly re-examined, in the light of the needs of a more broadly based employment strategy.

Cash crop production and livestock in the poorer farms and districts

At the moment there is a surprisingly wide imbalance among districts in the extent to which cash crops are grown and also, within districts, wide disparities between farms in the extent to which they have moved beyond subsistence production.

Part of our proposed strategy is to find ways in which districts and individual farms can be moved along the continuum from subsistence production to full commercialisation. For the very small farmer growing only subsistence food crops this strategy implies raising the productivity of food crop production so that land is released for the more profitable and labour-demanding cash crops and livestock. Equally, for districts still dominated by food crop production this strategy implies finding and introducing paying cash crops and livestock. For farms already producing cash crops a move towards full commer-

1 See Technical Paper 2.
Agricultural specialisation, i.e. complete specialisation in cash crop or commercial livestock production, will only occur when farmers can expect reasonably stable food markets. For these farms, and also for the large commercial farms and estates, the increase in output may or may not be associated with increased employment of hired workers, depending on the nature of the new technology. (For example, on coffee and tea estates the use of herbicides and mechanisation has meant that employment growth has failed to keep pace with the growth of output.)

From the point of view both of employment and of equity, we therefore consider that most attention should be paid to the smaller farms. In their case we would argue that the most promising basis for raising the productivity of food crops and releasing land is the rapid introduction of hybrid and synthetic maize, together with the improved husbandry practices associated with them. At the national level, increased production of maize is necessary for—

(a) stabilising prices both in and out of season; this in turn will lead to increased cash crop production and specialisation among small farmers;

(b) providing local feed for livestock, particularly for the intensive feeding of beef, poultry and pigs, all of which should have rapidly expanding markets in the next few years; and

(c) exporting maize directly, if it is possible, as it should be, to bring prices down to export parity levels.

There are five main ways in which increased maize production can be brought about, namely by—

(a) the adoption of hybrid and synthetic maize in areas and on farms where it is not yet grown;

(b) the improvement of yields in areas where hybrid maize is now grown, by raising standards of husbandry;

(c) growing hybrid or synthetic maize in the seasons where the second crop is at present non-hybrid;

(d) extending the ecological boundaries within which maize can be grown, and continuing to improve the genetic potential of intramarginal varieties; and

(e) breeding maize varieties which show some improvement over traditional maize even under poor management and soil fertility and in the absence of fertilisers.

We would recommend that the campaign to stimulate the adoption of hybrid maize should be a high priority of the agricultural extension service, especially in areas which have been previously neglected. This campaign would be aided by the continuation, and perhaps even an expansion, of maize demonstration plots such as those of the FAO Freedom from Hunger fertiliser programme. At the same time there is a need to ensure that farmers have easy...
physical access to material inputs on the lines discussed above in the recommendations on credit.

Maize is only one food crop where improved technology would improve living standards. Similar considerations apply to potatoes, which could be a valuable and widely adopted altitude food and cash crop, especially when a variety resistant to blight and bacterial wilt has been bred; and to the grain legume crops, which will be a valuable source of food protein as well as a potential source of foreign exchange earnings. It is therefore encouraging to note that there are research programmes which have been initiated in respect of both of these kinds of crops, and we recommend that they continue to be given high priority.

Although the basis of our strategy is increased productivity in food crop production, especially by the smallest, poorest farmers, it is essential that when a farmer can grow enough food, he should be provided with opportunities of producing a crop or livestock for the market. For an employment strategy, the most desirable commodities are those which have a high labour requirement per hectare; do not have a marked seasonal labour requirement that clashes with other crops; yield a high return per hectare; and have favourable long-term market prospects. Fortunately, maize is both a food and a cash crop, fits these employment requirements, and can act as a useful bridge in bringing a farmer to full commercialisation. Other cash crops which can be immediately identified as valuable in this employment strategy are pyrethrum, tea, horticultural crops both for domestic consumption and for export, and to a lesser extent coffee.\(^1\)

Rapid expansion in the small-scale production of pyrethrum has occurred since the sudden reversal of the international market situation in 1969. If the current pressure against the use of insecticides based on DDT continues, and if natural pyrethrum is competitive with synthetic pyrethrum products, then pyrethrum is a crop which could well expand in both area and output.

Tea production by smallholders has grown rapidly in the past decade from 1,400 hectares in 1961 to 21,200 hectares 10 years later. By 1975, the end of the third plan of the Kenya Tea Development Authority, the area planted with tea is to amount to 26,300 hectares, and is to rise to 42,300 at the end of the fourth plan, in 1978, and 60,000 hectares at the end of the fifth plan, in 1981.

The fourth plan is presently being submitted for financing and is likely to be approved. The fifth plan is still notional, but it is very much in Kenya's own interests in terms of income generation and employment that it should be implemented, and it is to be hoped that this plan could be accommodated

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\(^1\) An estimate of the significance of expanded cultivation of those crops and of others listed below for employment and rural incomes is given in Technical Paper 10.

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within any proposed international tea agreement.¹ A sixth plan, for a further 12,000 hectares, could be implemented by 1985. There will probably be increased employment on estates as well, for although there are no plans to increase the area under tea on estates it is expected that yields will increase by 3 per cent per annum.

There is likely to be a considerable expansion in horticultural production also in future years, both for the domestic market as the urban areas grow, and for export in the form of fresh or canned produce. Horticultural crops tend to be extremely labour-intensive, especially if grown on a small scale.

The area under coffee seems likely to continue to be restricted as long as the International Coffee Agreement is in operation. Indeed, the National Coffee Policy Plan and the Development Plan both forecast large yield increases, especially for smallholders, combined with a small reduction in area to meet the anticipated future rate of increase of the quota set by the International Coffee Organisation.

This yield increase would be assisted if existing producers who now find coffee a marginal crop could be encouraged to diversify out of coffee and to allow other smallholders to expand their area or new producers to enter the industry, perhaps even in areas outside the traditional coffee zone. The expected steady increase in coffee output will require an increased amount of labour, mainly for harvesting.

Much the same land-releasing arguments as are used in support of improved food crop production apply to the upgrading of native cattle through the use of artificial insemination and the intensification of the use of grassland through fertilisation, controlled grazing and generally improved management. We recommend that the artificial insemination service should be extended to areas not now covered, so that all small farm areas may be covered by the end of the decade. This is a suitable programme for external aid support. Land released could then be used either for keeping commercial dairy and beef stock or for tea, horticultural crops, pyrethrum, etc. As farm size declines with population growth, there will be a need for even more intensive animal husbandry, covering pigs, poultry or the stall feeding of animals under zero grazing systems. Proposals have been submitted to the International Coffee Organisation Diversification Fund for research into the fattening of beef under small farm systems, and it is to be hoped that they will be implemented in the near future.

Reducing dependence on rainfall

The unprecedented migration of population, due to land shortage, from medium-potential and high-potential farming areas into the marginal farming

¹ Further discussion on the international tea agreement will be found in Chapter 17.

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areas of Kenya is creating a potentially serious famine situation which will intensify as more marginal high-risk areas are opened up for settled farming.

The most effective measure for the alleviation of famine or food shortages, and also as the basis for improved farming in the medium-potential but densely populated areas is the development and spread of the early maturing, drought-escaping Katumani Synthetic and Composite maize crosses. By reducing the moisture requirement of maize, these varieties cut the frequency of crop losses from once in every three years to once in every eight years, and also push the margin of settlement to areas which receive as little as 5-7 inches of rainfall per season. However, in the past four maize-growing seasons, Katumani maize plantings have been disappointingly low. A major factor has been the shortage of seed, due to the present policy of growing all seed at Kitale in western Kenya. Although rainfall at Kitale is such that the seed crop rarely fails, the climate there is so wet and cool that in many years the seed is not harvested in time for it to be planted in the east of the country. The establishment of additional bulking centres with more appropriate growing seasons is essential, and smaller farmers should also be encouraged to grow the seed under contract.

We recommend that the encouragement of Katumani maize should continue to be a high priority of the Ministry of Agriculture’s services in these marginal farming areas. As an incentive, a temporary subsidy on Katumani maize seed, and also on other inputs used in maize production in these areas, should be considered. We also endorse the Ministry of Agriculture’s plans to expand the acreage of cotton in Machakos and Meru to 55,000 acres by 1980; but it is clear that if this plan is to succeed, extension must be greatly expanded to ensure that the crop is planted on time, that land preparation is adequate, that weeds are controlled, and—most important—that insect damage is reduced by the timely distribution and application of insecticides. The Mbere development plan recommends one extension agent to 250 acres of cotton, which implies 220 extension staff for the proposed programme.

The good demand for meat, especially beef, both in Kenya and abroad, makes stockraising an obvious choice as an activity on which to base the improvement of incomes of the semi-arid or arid areas that are not densely populated. The Government is fully aware of this potential, and is promoting intensive development of the ranch lands (including the existing commercial ranches) and extensive development of much of the semi-arid zone through individual, co-operative and group ranching schemes. The general strategy is to stratify the beef industry, with immature animals being taken from the semi-arid areas to areas of higher potential for finishing either on pasture or in feed lots. Private sources will undoubtedly finance much of the finishing end of this programme, but a massive capital injection through foreign aid will be needed for the range livestock project to develop the material
facilities needed to commercialise the cattle industry in the semi-arid zones. At the same time as this will increase incomes, better animal husbandry techniques, better disease-reporting techniques and better cattle marketing routes will reduce outbreaks of cattle disease and prevent severe food shortages for the pastoralists.

Employment effects

It is difficult to quantify the over-all effect of this strategy. (At the moment there are no firm estimates of labour coefficients available.) Moreover, we are concerned mainly with raising the living standards of self-employed farmers; for this purpose a measure of man-hours per hectare without an associated estimated income is insufficient. Thus the emphasis we place on increasing food crop production among smaller farmers does not show up directly in figures of increased hired labour, though it will have a substantial impact on raising the incomes of a large number of the 600,000 smallholders who at the moment are earning less than £60 per annum from farming. A farmer who adopts hybrid maize and increases his yield from a 0.5 hectare plot of maize from 7 to 20 bags will have increased his income by between £12 and £18 in monetary terms, and at the same time achieved self-sufficiency in the basic component of his diet.

However, in addition to the main improvements for smallholders, we estimate that the cash crop programme will also create about 450,000 man-years of productive employment. Besides raising the incomes of those growing the crops, this increase will more than double the amount of hired labour in small-scale employment at wages of between £35 and £50 per head.1 Because much of this employment will be of a casual or seasonal nature, it will be available for many part-time farmers, apart from the full-time employment available for a few others. There will also be an increase in hired labour as farms and rural businesses expand and multiply.

REDISTRIBUTION OF LAND

The second main thrust of agricultural strategy should be land distribution towards the smaller and more labour-intensive farm units. Far from leading to a sacrifice of output for the sake of more employment and better income distribution, evidence suggests that this is likely to lead to higher total output and incomes.

1 See Technical Paper 10.
A number of large farmers lack adequate capital and managerial ability to use all their available land effectively. This is one of the reasons why large farms tend to have a lower proportion of land under crops, lower output and lower employment per usable acre. These tendencies are well illustrated by a recent survey of large farms under African ownership in Trans-Nzoia district, the results of which are summarised in table 39. There are some exceptions to these tendencies, especially among farms between 1,000 and 1,250 acres in area. But in all these three respects farms of less than 250 acres do best on the average.

Small holdings are in these respects a viable alternative to large farms. This is well illustrated by comparing table 39 with table 40, which summarises similar information drawn from surveys of the settlement schemes. Even on the settlement schemes, there is a large decline in land utilisation on holdings over 20 acres (8 hectares) in size. And as with the sample of large farms, the general tendency is that the smaller the holding, the larger the gross output and employment per usable acre. For several reasons, the data from the two surveys are not entirely comparable. Nevertheless, taken together, they establish a strong presumption for thinking that both employment and output tend to be higher on smaller farms.\footnote{1}{For a careful assessment of the data, see the two reports given as the sources of tables 39 and 40. Note that the lack of comparability between the two surveys often seems to strengthen...}
Table 40. Output, net profit, land use and labour input by farm size on settlement schemes, 1967–68

<table>
<thead>
<tr>
<th>Farm size group (acres)</th>
<th>Average farm size in group (acres)</th>
<th>Gross output (sh. per acre)</th>
<th>Net profit (sh. per acre)</th>
<th>Land use</th>
<th>Stocking rate (grazing acres per unit of stock)</th>
<th>Labour inputs 1 (man-year equivalents per 1,000 acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10</td>
<td>7.3</td>
<td>635</td>
<td>424</td>
<td>45</td>
<td>0.9</td>
<td>808</td>
</tr>
<tr>
<td>10–19.9</td>
<td>13.8</td>
<td>250</td>
<td>139</td>
<td>30</td>
<td>2.6</td>
<td>399</td>
</tr>
<tr>
<td>20–29.9</td>
<td>23.5</td>
<td>156</td>
<td>86</td>
<td>24</td>
<td>3.0</td>
<td>234</td>
</tr>
<tr>
<td>30–39.9</td>
<td>34.7</td>
<td>161</td>
<td>66</td>
<td>16</td>
<td>3.8</td>
<td>159</td>
</tr>
<tr>
<td>40–49.9</td>
<td>44.4</td>
<td>113</td>
<td>51</td>
<td>14</td>
<td>4.1</td>
<td>124</td>
</tr>
<tr>
<td>50–59.9</td>
<td>52.3</td>
<td>98</td>
<td>49</td>
<td>13</td>
<td>5.1</td>
<td>111</td>
</tr>
<tr>
<td>60–69.9</td>
<td>64.5</td>
<td>98</td>
<td>42</td>
<td>19</td>
<td>5.3</td>
<td>109</td>
</tr>
<tr>
<td>70 or more</td>
<td>124.8</td>
<td>111</td>
<td>61</td>
<td>14</td>
<td>3.6</td>
<td>70</td>
</tr>
<tr>
<td>All settlement farms</td>
<td>30.5</td>
<td>156</td>
<td>81</td>
<td>19</td>
<td>3.5</td>
<td>190</td>
</tr>
</tbody>
</table>

1 This includes family labour and is therefore not comparable with the labour inputs in table 39.


led originally to the direct transfer of many large farms on the attainment of national independence, a sufficient number of years have now passed for a thorough reappraisal of the need to retain large-scale agriculture in the high-potential areas in its existing form.

Very briefly, there are three major arguments used in favour of retaining large arable or mixed farms. First, some people argue that the subdivision of large farms will lead to a reduction in "output". If this means "marketed output" then such a trend is quite likely in the very short run, since families on smaller farms often give priority to producing food for themselves over production for sale. However, there is no reason why total output should decline, because food consumed on the farm should be valued at the same price as that sold to other people. After all, both contribute equally to raising the standard of living of the people of Kenya.

Secondly, it is argued that to allow the subdivision of any farm will create a fragmented farm structure which it will be impossible to rectify in later years. Far from this being a weakness, it is our contention that it is imperative to
create hundreds of thousands of new holdings over the next two decades to give people an opportunity to earn their own living and thus avoid widespread rural poverty. It is inevitable that the average size of farm holdings will decrease, and attitudes and government thinking must be adjusted to this situation. In view of the rapid growth of the rural population, it was extremely naive to think that land consolidation could or should take place once and for all. Such consolidation must be continuous, adjusting the pattern of individual farming units to the changing population density.

Thirdly, it is argued that there are certain arable or livestock farming activities that can be carried out only on a large scale. These are commonly listed as the growing of wheat (and other small grains such as barley) and hybrid maize seed, the rearing of sheep and the breeding of cattle. The last two do not require good agricultural land, and even by 1985 no more than 4,000 hectares of land will be required for hybrid maize seed. Our concern, then, is whether there is any justification for retaining the current large mixed farm sector in order to grow wheat. Wheat is a technically difficult crop to grow because of the peculiar nature of wheat rust disease in East Africa. In the past the disease has caused frequent crop failure and has necessitated a continuous breeding programme to introduce new varieties which are temporarily resistant. This disease, taken together with the vagaries of the weather and the low average yield, has rendered wheat farming inherently risky even under competent management, and the low and variable returns per hectare have not made wheat a desirable small-farm crop. It has also lent itself to large-scale growing owing to the economies of scale in the capital equipment, e.g. tractors and combines, used in its production.

However, national wheat yields have risen over the past four years, mainly owing to better varieties and improved husbandry techniques, and there are now fewer reasons for regarding wheat as an unsuitable crop for a small farm. After all, wheat is successfully and very profitably grown intensively on small holdings in many parts of Europe and Asia, perhaps most notably in Japan. It seems, therefore, that the time has come for an intensive programme of research into methods of growing wheat on small farms. It is the sort of research project which could usefully be supported by a foreign donor, and we would recommend that the Government consider this possibility seriously.

In recent years Kenya has been able to supply both her own and Uganda’s wheat requirements. However, the demand for wheat is growing rapidly, so that by 1985 the joint requirement could be 500,000 metric tons, as compared with 220,000 metric tons now. On realistic yield projections, this would require between 270,000 and 310,000 hectares of land to be devoted to wheat in 1985,

1 Apart from plantation crops, which are considered later.
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as compared with a record area of 167,000 hectares in 1968 and a more modest area of 110,000 hectares in 1971. The questions that have to be asked are whether it is essential to continue with a policy of self-sufficiency in wheat for both Kenya and Uganda, whether the cost in terms of not attaining other desirable goals will be too high, and whether any other objectives with respect to wheat can be suggested. For instance, the Government could change its over-all policy from self-sufficiency for Kenya and Uganda to self-sufficiency for Kenya alone.

Alternatively, the portion of wheat requirements that could not be grown in Kenya at competitive prices could always be imported, or—perhaps more radically—the Government could slow down the growth of wheat consumption in Kenya by placing a sales tax on wheat products, i.e. flour or bread, or by imposing a tariff on imported wheat. In short, it is not necessarily an optimum long-run strategy for Kenya to retain its present wheat policy.

The discussion so far has been concerned solely with mixed farming (arable and livestock), and has ignored the question whether it is preferable to produce crops such as tea, coffee, pineapples for canning, sugar and pyrethrum on estates or on small farms. For our employment and income distribution strategy, it is better, whenever the crop is financially attractive to a small farmer, to rely on small farmers plus centralised quality control and processing. However, the extent to which it is possible to substitute smallholder for estate production is limited in various ways. Some firms in estate production dominate world trade; with production possibilities in several countries, there is a risk that they may avoid Kenya if they are not allowed to engage in estate production. The costs and benefits of running such a risk must be carefully weighed. Even for commodities such as tea and coffee, when an expansion of estate operations is not justified it may be expensive to run down the estates too rapidly, while for some commodities such as sugar there are real advantages in having a combination of nucleus estates and out-grower schemes so that the flow of produce into the processing plants can be more easily regulated.

In short, our analysis of these arguments suggests that there is no overwhelming argument for retaining all of the large farms in their present form. This is not to say that we are advocating the abolition of large farms, for given the need for increasing net output per unit of available land it would be unwise to destroy the large farms on which output per hectare is higher than the output that is likely to be obtained on a small farm at the moment. However, we are in favour of encouraging the subdivision, or the reallocation of ownership, of any large mixed farm in the high-potential areas where the total output per hectare is lower than could be obtained from a small farm of, say, 2 to 3 hectares, which is above the medium size of registered small holdings. If, over the period of the next decade, say 250,000 hectares of the existing large farms were subdivided into 2.5 hectare plots, this would create 100,000 family
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holdings. The net impact on families would be less than this, since many large farms already accommodate a substantial number of families.

There are several ways in which this subdivision, or reallocation, of ownership could be encouraged. First, a large number of farms that were transferred to African ownership were purchased by groups of people, and are being nominally run as co-operative or company farms. In fact, however, many are being farmed in individual plots, but this is rarely being done efficiently because this activity is in principle illegal and because these small farmers do not receive extension advice. It is therefore recommended that where the owners of a farm prefer to run it as a number of individual plots they should be actively encouraged to do so; that the individual plots should be demarcated, registered and brought within the scope of planning; and that extension advice and other assistance should be given to the new farmers.

Secondly, the Government, through the Ministry of Lands and Settlement, should act as a willing buyer of any large farm that is being offered for sale in the high-potential areas, with a view to subdividing it into settlement plots. An alternative to such subdivision might be the new co-operative settlement scheme which has been recently introduced and under which farms will be purchased by the Government and run as large mechanised units. It is intended that under this scheme the permanent labour force should comprise resident settlers, who will receive 1 hectare of land for their own farming purposes and a cash payment of £60 a year out of the anticipated farm profits in return for devoting one-third of their time to work on the main farm. This payment, relating to the anticipated farm profits, will decide the number of settlers that can be taken on each farm. The first phase of this scheme has been financed by a £2.5 million grant from the Government of the United Kingdom, which should enable between 35,000 and 40,000 hectares of land to be purchased from the remaining British owners of large farms. If this scheme succeeds, it may provide a suitable basis for the future purchase of farms from non-citizens. However, farms run on these lines require extremely competent and well motivated managers and well disciplined settlers. If the scheme shows signs of not living up to expectations, the Ministry of Lands and Settlement should not hesitate to subdivide these farms into conventional settlement schemes, but should limit the individual plot size to around the medium size of existing small holdings, i.e. 2–3 hectares, except in areas where the land is of lower potential.

Thirdly, the Government could take more action to ensure that land is not underutilised or poorly farmed. As a first step it should seize any farms that are seriously in arrears with repayments to the Agricultural Finance Corporation or the Agricultural Development Corporation. At the same time as it abolishes the graduated personal tax in rural areas, it should consider the intro-
duction of a progressive land tax related to the size and the productive potential of the holding. Such a tax, described in further detail in Technical Paper 15, would encourage farmers either to use their land more intensively or to sell off some of it in order to reduce their debt burden. Much more use should also be made of the legislation for the imposition of management orders—pushed if necessary to the point of compulsory purchase—on any land which is obviously neglected or undeveloped.

The Select Committee on Unemployment proposed that there should be a ceiling on the individual ownership of land. We have considered this question carefully and have decided that, in the short run at least, the introduction of measures to make a ceiling effective and to organise the redistribution of land and the payment of compensation would involve an enormous administrative burden. A more gradual and administratively decentralised approach to subdivision on the lines we propose, encouraged later by the incentive of a progressive land tax, would have the merit of moving towards the same end but would minimise any short-term loss in output by beginning with the least profitable large farms. After some years, and depending on the extent of subdivision achieved by the policies proposed (and on the progress in developing small-scale wheat production), a ceiling on individual land holdings could be introduced with less administrative work and dislocation.

Fourthly, steps to encourage subdivision are needed even on the larger of the small holdings. It is now clear from an analysis of recent surveys that many farmers were given plots under the Million Acre Settlement Scheme that are too large in relation to the labour available to farm them. Indeed, average gross output per hectare, net profit per hectare, the percentage of land under crops, the density of stock per hectare and the number of family and hired labourers per hectare all decline markedly once plots become larger than 6 to 8 hectares in size. We therefore recommend that steps should be taken to encourage subdivision of large holdings on settlement schemes, so as to create smaller holdings of a size that will encourage more intensive land use so that more families can be settled and the intensity of land use increased. We estimate that the area available for subdivision on suitable schemes amounts to about 350,000 hectares. Eventual subdivision of this entire area into, say, 3-hectare holdings would create a net addition of 100,000 holdings; that is, it would almost triple the number of families on settlement schemes. This could be achieved by means similar to those recommended for large farms, namely active encouragement of subdivision and the Government’s acting as a willing buyer of land or pursuing more active policies to ensure that land is not under-

1 At first, holdings of less than, say, 50 acres could be exempted, in order not to discourage further adjudication and registration of land (see Technical Paper 15).
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utilised or neglected. This form of subdivision should be very cheap in real resource costs since very few additional material facilities will be required.

It would also be desirable in all future land transactions for the Government to offer land on a leasehold or rental basis for only a relatively short period—e.g. perhaps 10 to 15 years instead of the current 99-year lease—so that a degree of flexibility in future land use is retained. It is well known that most farmers would prefer to purchase land freehold, but this desire is outweighed by the national importance of ensuring the full utilisation of land in the future. Moreover, a leasehold system would avoid some of the large capital gains which may accrue to farmers on selling their plots at substantially higher prices than the extremely low prices which they originally paid for them. It would allow the Government to retain the right to allocate land to the people who would make the best use of this scarce resource, and to exercise some regulation and control of its use. A leasehold system would also reduce the capital requirement or the indebtedness of a settler, leaving him with more capital to develop his farm.

SETTLEMENT

The underutilisation of land on large mixed farms and under the settlement schemes is only part of the problem. In other areas, mainly in the Rift Valley and Coast Province, there are equally large reserves of unused or underutilised land of high and medium potential. ¹

Narok district alone contains about 900,000 hectares of high-potential land—as much as the whole of Central Province. But whereas in Central Province there is about 0.5 hectare of high-potential land equivalent per person, in Narok there are 7.3. Part of the Samburu, Lamu and Tana River districts also contain underutilised high-potential land. ² In the country as a whole there are about 1 million hectares of medium-potential land available for development.

The fact that an area like Narok, where 1.8 million people could be settled in high-potential areas at the density of Central Province, is contiguous to areas such as Kisii, with a land availability of only 0.3 hectare per person, is an indication of both the strength of tribal and regional barriers in Kenya and the present imperfections of the land market in these areas. Narok district, for instance, is mainly trust land administered on behalf of the Masai by the county council.

1 See Technical Paper 11.
2 See Chapter 1.

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Yet, in view of the increasing population pressure in Kenya, it is imperative that the potential of those underutilised lands should be progressively tapped in the next two decades.

Where unutilised land belongs to the State, as in the Coast Province, there seems to be little difficulty in proceeding with intensification through settlement schemes, but in the main areas of trust or private land, new approaches will be needed. There are various ways of proceeding.

One way would be to adopt a laissez-faire approach of letting people from other areas infiltrate the underutilised areas. Whilst this is already occurring, it occasionally leads to tribal conflicts which could become serious, especially if large numbers of people were involved.

The conflicts might be reduced if there was a known and agreed, phased programme which set limits on the rate at which immigrants from areas of high population density could enter and be settled, so that there was time for adjustment, and so that local interests were protected. Local inhabitants could be given priority in the settled areas, but immigrants could be allowed in on a fixed annual quota. Local inhabitants could also be given preferential assistance, in various ways conducive to better utilisation of the land, but the goal should be to purchase outlying land every year for more intensive farming under multi-ethnic settlement schemes. These are especially needed in places where current developments are pushing up land values so rapidly that some owners are encouraged to hold land for speculative reasons, meanwhile putting it to little if any productive use. A second approach would be for the Government to endeavour to purchase trust land, or let it on a long lease, with a view to the settlement of landless peoples from the heavily populated areas. Yet another approach would be to adjudicate trust land and institute individual ownership to encourage the development of commercial agriculture in the hope that eventually some sort of subdivision or landlord-tenant system would develop. The latter process would be considerably assisted by the introduction of a progressive land tax.

Quite apart from the social and political problems associated with too rapid settlement of these lands, there will have to be considerable planning and expenditure on infrastructure. For these reasons, we do not anticipate a rapid rate of organised settlement. A reasonable target might be to settle 500,000 hectares, for instance, by 1985, so as to create holdings for perhaps 150,000 to 200,000 families.

In other areas, the exploitation of underutilised land will depend on the increased use of irrigation. There are probably several areas where small-scale irrigation could be introduced.\(^1\) At the moment there are just under

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\(^1\) See Technical Paper 12.
6,000 hectares of large-scale irrigated land in Kenya, but there are a further 160,000 to 200,000 hectares of undeveloped irrigable land available. The main factors that are holding up the extension of large-scale irrigation are the level of costs and the administrative and technical capacity required for planning, implementation and marketing. Available evidence suggests that the development costs for large-scale projects normally lie in the range of £700 to £1,000 per hectare, but may go as high as £2,000 per hectare. ¹ Very efficient production of high-value products is thus required for irrigation to be financially successful. This in turn requires experienced irrigation engineers and agriculturalists, but both are extremely scarce at the moment. However, as the employment potential of an irrigation scheme is such that a family with present crops could earn a cash income of £75 per annum from an area of 0.8 hectare, it is almost inevitable that irrigation development will become increasingly important, particularly in the 1980s and 1990s.

The two main areas where large-scale irrigation has been shown to be technically feasible are the Tana basin and the Kano plains. Surveys have been conducted in both the Upper Tana and the Lower Tana catchment areas, and indicate the need for an integrated development programme for the whole area to obtain an optimal utilisation of the available water supplies. The long period over which developments will take place should not be allowed to obscure the need to make an early start in building up the required planning and implementation staff for a major irrigation programme. We therefore recommend that one or two medium-scale irrigation schemes should be included in the next development plan, but with smaller plot sizes than on existing schemes so that the costs per family are reduced and the benefits spread over a large number of people.

CONCLUSION

If it were followed, the agricultural strategy outlined in this chapter would go a long way towards improving rural incomes and employment, both for existing rural households and for the additional 1.1 million rural households that are anticipated by 1985. The emphasis on food production and improved farming practices for the poorest farmers should help to raise their incomes substantially; at the same time it should double the amount of hired labour required on the small farms by creating about 450,000 man-years of employment in agriculture by 1985. Most of the new rural family holdings will have to be created by the traditional subdivision of existing small farms, but by 1985 we also expect that between 350,000 and 400,000 new agricultural holdings may

¹ See Technical Paper 12.
have been created by the subdivision of large farms and settlement plots, and by the settlement of underutilised land.

Wherever possible, we have emphasised the more efficient use of existing resources. However, the demands for increased research, for development of the semi-arid areas, for subdivision and resettlement and for irrigation would put an intolerable strain on Kenya's resources if all were responded to immediately. We therefore see our programme as stretching over the next two decades.

In terms of financial expenditure, we would recommend that the programme to develop the livestock industry in the semi-arid areas should be implemented immediately on both economic and social grounds. The settlement programmes should also be implemented at an early stage, but it is essential that this be done at the lowest cost consistent with giving the settled farmers a reasonable chance of success, and plot sizes and infrastructure must be kept to the minimum consistent with this aim. Heavy expenditure on irrigation should be delayed until the 1980s.
To attain the goals of the strategy proposed, the past high growth rate of industrial output must be at least maintained, and industrial employment must increase faster than it has in the past. During 1964–70 the growth in output in the enumerated sector was about 8 per cent per annum, as against an increase in employment of under 4 per cent per annum, barely in line with the growth of the population. Employment in the unenumerated small-scale and informal industrial sector (not included in the above figures) has probably increased much faster. ¹

Industrial output must increase enough to provide the farming population with inputs and manufactured consumption goods; to provide exports (of the kind to be discussed later in this chapter) which we believe ought to increase at an annual rate of about 10 per cent to constitute a gradually rising proportion of Kenya’s total exports; to continue to provide substitutes for imports, but more efficiently, at lower cost and with less over-all protection than in the past; and to allow the development of labour-intensive technology and the capital goods manufacture in which such technology must be embodied. ²

An output growth of some 9–10 per cent per annum is thus needed in both large-scale and small-scale industry, with a growth of perhaps 6 per cent in total labour absorption. The development of efficient import substitutes should hold the growth of imports of manufactured goods at 5 per cent per annum.

A higher rate of increase in industrial employment is also needed to provide a healthier basis for the continued urbanisation and migration from rural areas which we expect. Our suggestions are designed to raise the proportion of

¹ Wage employment in all non-farm rural activities increased by 45 per cent between 1967 and 1970. See the section on small-scale industry later in this chapter.

² See Chapter 9.
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industrial production and employment in the smaller towns and rural areas as against that located in Nairobi.

At present, the distribution of enumerated wage employment by size of establishment shows a heavy preponderance of employment in large firms with 50 or more employees (almost 75 per cent). Of the 19 manufacturing industries only 2 (furniture and fixtures, and non-electrical machinery) have less than half of total wage employment in establishments with over 50 employees. The preponderance of large establishments in total employment has remained virtually constant, or if anything has been strengthened, since 1964, and the small firms (5 to 19 employees) have lost ground to the medium-sized firms (20 to 49 employees).

LARGE-SCALE INDUSTRY

Main aspects of government policy

The main aims of an industrialisation strategy are set out in the Second Development Plan ¹, and policies have been developed to satisfy the following multiple objectives:

(1) "An active and ... growing participation of Kenya citizens in management and ownership of industry." This has been pursued by the promotion of small-scale enterprise through loans by the Industrial and Commercial Development Corporation for the purchase of machinery and equipment; the establishment of the Nairobi industrial estate and plans now being implemented for the expansion of other estates; and "Kenyanisation" of management through the system of working permits for foreign personnel combined with various forms of management training. There are considerable obstacles at present to the development of large-scale private industry in Kenyan ownership, and industrial investment continues to be preponderantly foreign. There is much potential in the small-scale rural and urban informal sector. Our recommendations are aimed at overcoming the obstacles and making improved use of the potential.

(2) An increase in "the degree of processing of raw materials" presently exported. The chief raw material base of the Kenyan economy is agricultural, and our recommendations centre upon the export of processed agricultural products as a major component of an employment-intensive industrialisation strategy. We believe that the policies actually followed have often been more

harmful than helpful to the development of such exports. The policy of promoting such exports need not be limited to raw materials presently exported.

(3) Continued import restriction, with increasing opportunities of producing some capital goods. This has been the main thrust of government policy in the large-scale sector. The recent balance-of-payments difficulties have added the saving of foreign exchange as a major further incentive for such a policy. The chief instruments for carrying it out have been protection measures, including an external tariff, quantitative restrictions and import licensing; and positive inducements such as drawback of duty on imported intermediate products, investment allowances and measures to attract foreign investment. The policy of protection is administered by the Industrial Protection Committee made up of representatives of the Ministries of Finance and Planning, Agriculture, and Commerce and Industry. We believe that the policy of import substitution through protection, as practised at present, has serious drawbacks for employment and for income distribution.

(4) An increase in the degree of government participation, “both in terms of the promotion of new projects and in the financing of them”. We believe that some forms of government promotion, including some forms of sacrifice of government revenue, are not the best use of public resources, and some policy changes are recommended, especially in relation to foreign investment and loan policies.

(5) “A wider geographical dispersal of the benefits of industrialisation.” This objective is important not only from the point of view of equity but also in the context of employment and income distribution. We believe that some current policies, especially the system of protection, have the indirect effect of counteracting a wider geographical dispersion, by making the use of imported materials more attractive than the development of local materials or subcontracting to local suppliers and by operating against export industries based on agriculture. An emphasis on small-scale and rural industries will also have the effect of spreading the benefits of industrialisation more widely. Artificial incentives may be less important than the removal of distortions.

(6) “Encouragement for the development of a single market for manufactured goods within the East African Community.” Exports of manufactured goods to Uganda and Tanzania are almost twice as high as those to the rest of the world (1970 figure). However, Tanzania and Uganda have made extensive use of the transfer tax mechanism ¹, and in recent years this has restricted the expansion of Kenyan manufactured exports, especially textiles. A possible

¹ See Technical Paper 16.
enlargement of the Community could increase export opportunities. We were not able, however, to consider specifically the problems of the present or enlarged Community.

**Import substitution and its main defects**

Import substitution has been the main avenue of Kenya’s industrialisation policy as applied to the modern urban sector. Its balance-of-payments and technological implications are discussed elsewhere.¹

By its very nature, import substitution is likely to confirm and strengthen unequal income distribution and lack of income-earning power at the lower end of the income scale, which we have identified as one of the most important aspects of the unemployment problem in Kenya. The list of imports dictates the goods for which domestic products should be substituted. However, the list not only reflects the present pattern of demand (which in turn reflects the present income distribution) but actually magnifies the effect of income inequalities. For it is the members of the upper income group (historically, and to some extent still now, an expatriate group) who have an import-intensive demand for manufactured goods and consumer durables.² Therefore, by selecting those goods for domestic production, preference is given to what may be called “inappropriate products”, inconsistent with the demand structure arising from the employment strategy here suggested.³ In Kenya, fortunately, this is more a future danger than a past development, so that mistakes can still be avoided. Moreover, the local market for these products is bound to be small, being limited by the small size of the middle-income and upper-income groups in Kenya. Export opportunities are unlikely, since these are the traditional products of the richer countries, in which those countries have acquired long experience and developed efficient technology. For the same reason, the efficient manager is more likely to be a foreigner than a national. It is paradoxical that while these imports are classed as “inessential”—and priority candidates for restriction under balance-of-payments pressure—they often become favoured and protected “infants” for domestic production (where surely the criterion of what is “essential” for local consumption should if anything be stricter than for imports). Once the product has become a “local” product (although often produced by foreign enterprise) the inputs required (capital goods, materials, spare parts, etc.) are also classified as “essential”—and indeed it is true that once the structure of industry has been shaped by import substitution, any inter-

¹ See Chapters 9 and 17.
² For instance, 50 times more is spent on imports of passenger cars than on imports of bicycles and more on passenger cars than on buses, trucks or lorries and their components.
³ See Chapters 6 and 9.
ruptions to the flow of imported inputs are bound to create disruption and unemployment. However, a local capital goods industry can be rightly classified as essential since it is normally versatile in end use and becomes an inevitable adjunct to the development of an appropriate indigenous technology.  

Import substitution tends to result in high-cost industries because the protection afforded will make it possible to survive even with high cost. This is added to a number of factors which in any case raise industrial costs in Kenya in relation to those in developed countries. Ocean freight and higher installation costs inflate the cost of machinery and equipment. Construction costs may be higher, partly because of the need for large repair workshops or foundries, etc. for the production of spare parts, or for large stocks of spare equipment. (The premises of firms in Kenya are often larger than normal for this reason.)

The high cost of production under import substitution can be offset by making imported materials and equipment artificially cheap (essentially by undervaluing foreign exchange through the rationing and restriction of imports), but this is done at a heavy price: it becomes more profitable to import these requirements than to rely on local suppliers, and one result is that capital-intensive (which also means import-intensive) methods become preferable to labour-intensive local methods. Moreover, the undervaluation of foreign exchange (or the overvaluation of the domestic currency) will make exports less profitable. Recent studies have shown that a number of Kenyan industries would be able to export competitively at international prices. The present system operates partly against agricultural exporters, but mainly against the development of new exports. This is why domestic exports of manufactured products have fallen as a percentage of total exports since 1961, especially because tinned meat (meat preparations) and tinned pineapple are included as manufactured products. High unit costs also explain why, for example, the Kenyan textile industry has proved vulnerable to the transfer taxes of the two Community partners.

1 See Chapter 9.
2 See Chapter 12 for a discussion of the multiple benefits for an employment strategy that flow from the development of domestic capacity in repair, maintenance, transport and spare-part production.
3 The undervaluation of foreign currency was partly corrected in 1971 when the rate of exchange of the Kenyan pound to the United States dollar was maintained. However, in 1967 the undervaluation had been intensified when the rate of exchange between the Kenyan pound and the pound sterling was altered.
4 These include the building of lorry and bus bodies, canvas goods, timber products, printing, leather tanning, and the manufacture of several chemicals and pharmaceuticals and agricultural machinery, as well as several traditional exports. See M. G. Phelps and B. Wasow: Measuring protection and its effects in Kenya, Institute for Development Studies, Nairobi, Working Paper No. 37, which shows that protection in Kenya is consistently biased against viable sectors of the economy.
5 That is, exports to other countries within the East African Community.

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Under proper conditions, import substitution still has a useful role to play. The dangers discussed in the preceding paragraphs are still more prospective than actual. A number of import substitution industries do use domestic raw materials, including sawn timber, plywood, pulp and paper, cement, wooden furniture, shoes, natural textiles and clothing. Kenya still imports almost half of its consumption goods, and even with a different income distribution and different product policy there will still be goods now imported which could be usefully home-produced. Of total textile consumption, 66 per cent (by value) was still imported in 1970, 43 per cent from outside East Africa. There seems further scope for import substitution in respect of such items as refined sugar, baby foods, knitting mills, cotton fabrics of high quality (partly for export), wool processing (also exports), footwear, clothing, made-up textiles, plywood, wooden furniture, paper products, leather goods, rubber products, vegetable oils (if the supply of oilseeds, including maize, can be developed) and special paint and varnishes. All these products have domestic linkage and fall within "essential" categories. Selective import substitution need not necessarily mean less import substitution, but it could be more useful in terms of employment and contribution to the national product. The shift from consumption goods to intermediate goods will open up new possibilities, including the development of spare parts production.

Capacity utilisation

Fuller utilisation of existing capacity is a specially capital-saving way of increasing employment. Accordingly, we have given attention to this aspect, and were able to benefit from a special survey undertaken 1, although the time factor forced us to depend on preliminary data. These indicate that there is no widespread underutilisation of capital as measured in terms of the number of shifts worked compared with those desired by managements. On this, the report of the industrial mission from the International Bank for Reconstruction and Development, the findings of our mission during visits to factories and the special survey all agree. Nevertheless, total gross product would have been at least 11 per cent higher if all firms had been working at their own preferred levels, and 100 to 135 per cent higher if capital utilisation had been pushed to a maximum. 2

There is thus a considerable potential for increasing output and employment with the existing stock of capital. The reasons why output and employment

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1 The study was undertaken by the statistics division of the Ministry of Finance and Planning in co-operation with research workers at the Institute for Development Studies, University of Nairobi, and the mission. The survey was limited to firms employing over 50 workers.

2 100 per cent at a level of plant utilisation of 140 hours a week (allowing for repair, maintenance, etc.) and 135 per cent at the theoretical maximum utilisation of 168 hours a week.
are only half of what they would be with the reasonably full utilisation of 140 hours per week will be further analysed on the basis of the special survey, but the results were not available in time for our report. These findings could be of considerable importance for employment creation in manufacturing, and the collection of such information on a continuing basis would be most useful. The industries with the highest rates of underutilisation (working 48 hours or less a week) were meat products, dairy products, sugar and confectionery, miscellaneous foods, spirits, tobacco, furniture and fixtures, paints, miscellaneous chemical products and shipbuilding. On the other hand, in only 12 of the 44 industries covered was actual utilisation considered satisfactory since they worked 140 hours or more per week. The 12 industries are: bakery products; sugar; knitting mills; cordage, rope and twines; textile spinning, weaving and finishing; pulp, paper and paper board; oils and fats; wattle bark extracts; pyrethrum extract; petroleum products; cement; and miscellaneous manufacturing.

There is another form of underutilisation of capacity. This occurs when a plant is designed to utilise equipment based on specifications of firms established in developed countries and catering to much larger markets. In the smaller Kenyan plant the capacities of the various machines or processes may not be as well matched, so that part of the equipment will stand idle. But such problems are more prevalent in heavy industry, and although signs of such problems were found, we have no reason to disagree with the World Bank team which reported in 1970 that “in general, machinery and equipment has been well selected to produce limited production runs economically”. This question of design and balance of equipment should, however, be taken into account when project proposals are evaluated.

A third reason for underutilisation of capital in Kenya is perhaps the most serious one. With a relatively high level of protection coupled with financial incentives, firms are tempted to establish capacity before the size of the market warrants such a move. Moreover, firms have established plants in Kenya for the whole East African Community, to find themselves limited to the Kenyan market by development of production in the other member countries. The high level of protection allows the higher cost to be passed on to the consumer. The manager of one new international subsidiary told the mission that the size of the domestic market would, in seven years, be sufficient to permit an efficient level of operation. Obviously, if the firm had waited so long to begin installation of their plant, they would probably have found one of their international competitors already producing in a monopoly market. Such premature establishment should be prevented; this requires either a change in the protec-

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1 Industrial development in East Africa, op. cit.
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 tion system or methods of project evaluation which defer such plants and pre-
vent a race for protection. We must, however, add one warning: simply to
expand output in industries in which capacity is at present underutilised—or
worse, to offer special subsidies or other inducements to encourage this—may do
little to increase employment. It could even reduce total employment by shifting
demand from the most labour-intensive, small-scale production, in the informal
sector or outside. The issues are complicated, but they involve the realities of an
employment strategy.

The foreign-owned industrial sector

The estimated share of foreign-owned manufacturing enterprises in the
output of the modern manufacturing sector is 57 per cent, and even higher for
profits at 73 per cent; both shares are believed to be increasing. The greater
profitability of foreign enterprise seems to be due to its stronger representation in
the more profitable branches rather than to a higher profit rate in any given
branch.

The Kenya Government has encouraged foreign investment since the
attainment of national independence, although always subject to certain
controls (in particular Central Bank approval for any transfer of funds).
There is an investment allowance of 20 per cent of the value of new fixed assets,
which makes capital cheaper than it would otherwise be, especially in relation
to labour. A further argument against the investment allowance is that it
entails a loss of government revenue with probably only minimal effect on the
total volume of investment.

Income distribution and employment implications are not taken directly
into account when evaluating proposals for investment by foreign-owned firms,
although no doubt they enter into the evaluations indirectly under headings
such as “local value added”, “utilisation of local materials”, and “introduction
of new skills”. There is no systematic use of a social cost-benefit system.

An analysis of foreign and locally owned firms using depreciation costs
per worker and gross product per worker as yardsticks of capital intensity
shows that on the whole, foreign firms are about 20–30 per cent more capital-
intensive than locally owned firms; but this impression may be misleading.
When the comparison is made for branches of manufacturing in which foreign
and local firms operate side by side, it turns out that the foreign firms are
actually about 20–30 per cent less capital-intensive. Equally contrary to

1 For a more detailed discussion of private foreign investment, see Technical Paper 16,
on foreign investment in Kenyan industry.
2 The effect of this on technology is discussed in Chapter 9.
3 See Technical Paper 16.
4 In the regrettable absence of capital stock data; see Technical Paper 31.
common belief is the finding that foreign firms tend to have lower labour cost per employee. The results of this analysis are, however, in need of further testing. The explanation which suggests itself is that foreign enterprises have more skilled supervisory staff and that this allows them to use production techniques which use more unskilled labour. This would apply to grain milling, bakery products, sugar and confectionery, beer, furniture, paper and paper products and non-electrical machinery.

Kenya has been very easy-going in permitting the subsidiaries of foreign firms to make payments freely to the parent company in respect of research and development services, other technical services, management fees, etc., in addition to royalties and transfer of dividends and profits. This can result in a considerable outflow of funds—far in excess of declared profits. Many developing countries do not permit such duplication of transfer payments. Kenya has recently imposed a withholding tax of 20 per cent on such technical payments, so that at least there is no loss of revenue to the Kenyan budget. Another method by which excessive funds may be transferred abroad is the questionable practice of issuing shares as payment for the use of processes while at the same time charging the subsidiary a royalty on sales for technology—a type of accounting not permitted in many developing countries.

Another major danger of leakage of funds lies in the over-invoicing of imports, use of transfer pricing in intra-firm dealings, and perhaps under-invoicing of exports.  

A new industrial strategy

In the light of the above analysis we propose that future industrialisation be turned away to some degree—and strongly so in the case of foreign investment—from protected firms producing import substitutes toward industries that—

(a) use domestic raw materials; given the nature of the existing resource base, this means considerable emphasis on industries processing agricultural products;

(b) have potential for developing a comparative advantage in export markets;

(c) are more labour-intensive than most of those promoted by import substitution;

(d) would contribute significantly to employment through a backward linkage effect; and

(e) can be economically located in smaller towns and rural areas.

1See Technical Paper 16.
Most of the manufacturing industries that process agricultural products meet the above conditions. They stand out clearly when Kenyan industries are ranked by degree of labour intensity and the extent to which they are based on domestic resources. They include meat preparations, vegetable and fruit processing, cotton fabrics, wool processing, clothing, made-up textiles, leather tanning, leather footwear, vegetable oils, sawn wood, plywood and wooden furniture.

The industries typically favoured by protection rank very low. The above list of processing industries combines all the multiple elements required. In addition to the five advantages listed on the preceding page, they operate in an unprotected world market where efficiency is required. They offer an ideal place for foreign investors with their expertise in world marketing, advantages of brand names and so forth. Using domestic supplies, they offer less chances for over-invoicing of imported supplies and for other sources of leakage of funds from Kenya. By tying these firms to the unlimited world market rather than to the constraints of the local high-income market, the reinvestment of profits is encouraged. The inducements of an artificially protected home market can then be reserved to a greater extent for Kenyan enterprises, private, public or mixed. No question of appropriate products arises for Kenya where the high-income world market is concerned. The balance-of-payments difficulty is eased. At the same time, these industries, based on the country’s own resource endowment, would also lend themselves more naturally to emergent local enterprise and to indigenous technical adaptation. We estimate that up to 15,000 new jobs could be created by 1985 through the development of industries processing agricultural products. The policy here suggested has further advantages:

(1) A doubly beneficial impact on labour intensity. Industries processing agricultural products are relatively labour-intensive themselves and link back to labour-intensive rural activities. Moreover, analysis suggests that with development of management and supervisory techniques additional scope for efficient labour-intensive production can be created.

(2) Under the present protection system, the earning of foreign exchange to finance the repatriation of profits of foreign investors will cost Kenya less than the saving of foreign exchange through highly protected import substitution.

(3) As import substitution opportunities become more available to Kenyans, the surplus is more likely to be reinvested in Kenya, and this should lead to product diversification.

\[1\text{ Such as soft drinks, rubber products, plastics, basic chemicals, pharmaceuticals, petroleum refining and electrical appliances.}\]
It is clear that the multiple advantages of the industrialisation policy suggested fit in extremely well with the objectives of an employment strategy. But a few caveats must be emphasised:

(1) There is still substantial scope for genuine import substitution of a healthy kind; in fact, some of the very industries here recommended would produce substitutes for imports in addition to exports.

(2) Some industries with low labour intensity process domestic materials and add value to exports (e.g. instant coffee, tea essence, pyrethrum extract), or produce essential supplies with linkages to labour-intensive sectors (e.g. cement and pulp and paper).

(3) In other cases a labour-intensive industry could be justified even if based on imported materials. Metal furniture, rubber footwear, suitable assembly industries could be examples. In fact, we have considered an extreme example of this kind of activity—the development of international subcontracting—and believe it would have a number of advantages for Kenya if properly approached.

(4) The evaluation of an industrial product or proposal is in each case unique, and indirect as well as direct linkages must be considered. There is no room for dogma here. Improvement in the techniques of project evaluation, and in the preparation of feasibility studies and the conduct of negotiations with both foreign and local investors, would be very valuable to Kenya, and deserves to be given high priority, perhaps with the help of international organisations.

(5) Production for export presupposes access to the markets of other countries. It is therefore implied that the richer countries will in particular assist Kenya in this re-orientation by permitting such access, or that the East African Community in its present or expanded form will remain or become an active force for trade promotion.

Action proposals

We are now in a position to bring together our main recommendations as follows, some others being implicit in the text:

(1) The present system of protection, which has a number of unintended and undesirable effects, should be revised and unified; this is compatible with selective import substitution.

(2) Higher priority should be given to industries processing agricultural products for export, and the obstacles to exports involved in the present system should be removed. The duty drawback system by all accounts fails to function properly, and other export incentives and subsidies compatible with international rules should therefore be considered.
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(3) Possibilities of international subcontracting should be developed whereby Kenya would produce parts and components for firms in industrial countries. The experience of other countries should be studied. ¹

(4) The rules and criteria concerning foreign investment proposals should be revised to align foreign investment with the re-orientation suggested under (1) and (2) above. Some priority for Kenyan firms in incentives and protection on the local market can be justified on a number of grounds. Public resources and credit could be reserved for such firms.

(5) The Government should intensify market surveys of long-term prospects for processed fruits, vegetables, meat products and timber products, as well as feasibility studies, covering both agricultural supply and industrial processing, of industries using agricultural raw materials. To the extent possible, this should be on the basis of agro-industrial complexes with maximum utilisation of by-products and waste products, and be assisted by international or other external sources. This should also include increased research on high-value crops (asparagus, mushrooms, strawberries, etc.).

(6) The techniques of project evaluation, feasibility studies and negotiations with potential investors should be studied and improved.

(7) Selective export subsidies for new exports should be given, as part of a broader correction for a general bias against manufactured exports.

(8) Premature establishment of industries operating with underutilised capacity should be discouraged.

It is also essential to resolve the conflict between income tax revenue objectives and objectives of foreign exchange control. In particular this means that enforced distribution by private foreign companies should be discontinued. Instead, private companies should be required to give detailed accounts of the uses to which their undistributed profits are put, and their borrowing rights on local loan markets should be tied to their repatriation ratios, as for public companies (although both should have less access to local loan and equity capital than at present). If proposals for a revised system of company taxation are adopted, both private and public companies, as well as branches, should be brought under the new system.

In any event, the exemption of branches of foreign firms from the withholding tax on distributed profits should be abolished. Instead, branches should be subject to withholding tax on all profits remitted to parent enterprises, even though they are not declared as dividends.

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The investment allowance should be discarded, preferably as part of a broadening of the tax base of the present tax on profits to include (at a lower rate) in addition to profits, all royalties, technical payments and especially all imported inputs (to reduce the motive for over-invoicing and hidden transfers). If this is not accepted, the investment allowance should be replaced by a tax on fixed assets of at least equivalent size to the present deduction, but possibly greater. This might have some disincentive effects on foreign investment, but is in any case justified on employment grounds. Subsidies or tax credits in respect of local subcontracting could be considered.

The threat of potential protection for rivals is a useful and probably important incentive to foreign investors. It should be judiciously used to encourage the desired types of foreign investment. This could to a considerable extent offset any disincentive effects of a capital tax, while retaining the labour-capital substitution effects of a capital tax.

The bias against local spare parts and light machinery industries which is implicit in the present systems of effective protection should be removed, particularly in fields in which this bias is detrimental to the development of local fabrication capability with potential for labour-intensive technical change, such as the manufacture of light machinery for small holdings, and of spare parts for agricultural machinery in general. All this is, however, contingent upon positive action to stimulate the development of spare parts, light machinery and repair and maintenance facilities, and touches upon long-term strategy.

The system of negotiations with foreign investors needs to be improved in the following ways:

(1) The delays resulting from joint project evaluation by the Ministries of Finance and Planning and Commerce and Industry should be removed; clearer criteria should be formulated, in order to allow quicker and consistent decisions to be reached.

(2) Secretariat support should be improved, so as to make it possible to develop gradually an ability to identify and tender for potential projects, instead of waiting for proposals from interested investors. The development of such an ability was the intended purpose of the Industrial Survey and Promotion Centre in the Ministry of Commerce and Industry, which has not yet succeeded.

(3) Wherever possible, proposers should be required to put forward alternative projects, with differing labour intensity.

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1 See Technical Paper 17.
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(4) A number of proposals should be kept in the air for a longer period. This would increase the prospects of a better bargain for Kenya.

Access to local resources should be more rigidly restricted; it might well be tied to satisfactory proof that the foreign enterprise has a low repatriation ratio and that there is no over-pricing of intermediates or excessive payments for technical services, management fees and the like. The idea that government participation is necessary to control foreign enterprise is mistaken.

Royalties on brand names and technology should be limited (to perhaps 1 per cent of sales for brand names and 5 per cent for technology). Companies paying technology royalties should not simultaneously pay regular technology fees.

Each year a 10 per cent random sample of foreign enterprises should be exhaustively examined on such matters as customs and excise receipts, royalty payments and management fees.

The management and supervisory techniques which enable foreign enterprises to economise on capital and scarce labour skills should be carefully examined with a view to spreading the use of such techniques to larger-scale local enterprises.

It is realised that some of these recommendations aim at long-term structural change and may require a strengthening of staff. However, a start on the necessary studies should be made in the near future.

Long-term policy

The shortage of managers and supervisors in Kenyan-owned industry has already been identified in Chapter 9 as being of critical importance. This is not easily dealt with. We doubt whether the real answer lies in management schools or formal training in supervisory skills as a way of creating managers and supervisors, even though this type of training can undoubtedly help. Basically, however, these are skills which are developed by experience, but this can be bought at a high cost.

One possible approach to the problem which might ease the way to long-term development of Kenyan-owned industry would be to set up state-owned or partly state-owned plants, and to use management contracts with foreign enterprise as a means of providing essential managerial and technological competence in the short run. This would provide effective state control over enterprises which may be expected, with the foreign management expertise, to generate large surpluses, and would hence solve some of the problems of acquiring fiscal control over surpluses, and avoid their repatriation through the back door. State enterprise will be easier to use as a means of generating external economies—in particular to link up with potential subcontractors in the informal sector,
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which would be a more effective arrangement than subsidised subcontracting, for example.

We are aware of some severe problems in state-owned manufacturing in other countries. Yet management contracts may be best for Kenya in the sectors in which large scale, technological complexity and capital intensity cannot be avoided (which might well include some capital goods sectors in the future). We regard this as definitely preferable to the present policy of investing large amounts of public money in equity and loan participation in foreign-owned enterprise, because the latter system results in the expatriation of surpluses earned on Kenyan capital resources (as a result of techniques of transfer accounting which place a large proportion of the total potential surplus in the hands of parent enterprises before they declare their profits in Kenya itself). We already have recommended that public resources used as equity capital should be reserved for Kenyan-owned enterprise.

Foreign private investment will continue to be needed under any employment strategy for the following reasons:

(1) However successful Kenya and the rest of the developing world might be at generating labour-intensive technical change, there will still be many fields in which it will be possible to produce higher-quality products at lower unit costs with foreign capital-intensive technology than with the other technologies available to Kenya. In many of these fields, the only way to acquire the technology needed will be to allow direct foreign investment.

(2) Foreign companies may develop more effective production technologies than locally owned companies, either because they may be better able to adapt their production techniques and products or because they may be able to use techniques which they have mastered but have ceased to use in the industrialised countries.

(3) These problems will be enhanced because of the lack of required management, supervisory and production skills in Kenyan industry, so that even if the production technologies are not proprietary, or monopolised in other ways, there will be no alternative to foreign direct investment if the product is to be produced in the country.

(4) Finally, foreign enterprise will also have an important role to play in the development of export-oriented industries based on Kenyan primary products, such as canning of fruit and vegetables. A successful export effort in these respects may depend upon the brand names, process technology, and export organisation of foreign enterprise. Although we would expect trade among developing countries to play a more important role in the international economy in the later 1970s than it does now, Kenya's exports to advanced countries will remain a vital source of foreign exchange for many years.
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These four functions of foreign enterprise implicitly define the basis for a more selective policy towards foreign investment in Kenya.

RURAL AND SMALL-SCALE INDUSTRY

Many of the enterprises in this sector are of recent growth, in a field not previously pre-empted by non-citizens. The growth of these activities has been very fast. The average rural unit is a self-employed man with perhaps two working family members and one wage employee outside the family. The size tends to be larger in small towns, where many manufacturing and repairing workshops have five to ten wage employees. The following seven activities accounted for 90 per cent of total employment: posho (maize meal) mills, footwear, tailoring, sawmills, furniture making, metal working and bicycle repairs. To these we may add garages and the manufacture of cement blocks and other construction material in the small towns. Capital requirements are very small, mostly under £50 initially, and mainly drawn from the entrepreneur’s own or family savings; this sector mobilises potential savings not otherwise available. Loans from the Industrial and Commercial Development Corporation or other sources, mainly for the larger units, often impose a considerable repayment burden.

The great majority of the rural producers are part-time farmers; of the rest some are also teachers or government officials. Accordingly there is a two-way cash flow between farming and rural small-scale industry; cash earned from the latter may go to the payment of school fees, setting free cash farm earnings for investment in the farm. The nature of technology in the small-scale rural sector is now largely determined by the nature of training, almost entirely of the prototype transfer type under which a senior worker passes on his own specific way of doing to the learner on the job. Exact and rigid copying of the master craftsmen’s or senior workers’ techniques results. This makes for lack of product differentiation and lack of versatility in adjusting to new opportunities or in initiating product variations in design or quality in accordance with changing demand. Poor quality of products and lack of flexibility may also cause rising rural incomes to by-pass the small rural manufacturer to the benefit of a large producer, who in Kenya will often be foreign and normally based in Nairobi. However, different local designs for hoes, ploughs, ox carts and wheelbarrows are specially suited to different ecological conditions in

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1 The data on which this section is based were largely derived from a rural enterprise survey in Nyeri in which a member of the mission participated; the resulting conclusions are believed to apply to rural industries generally, and also to small-scale and informal urban activities.

2 Between 1967 and 1970 wage employment in non-farm rural activities increased by 45 per cent (to 90,000), compared with 7 per cent for wage employment in the modern sector (Economic survey, 1971, and unpublished data for 1967).
Industry and construction

different areas. In this respect the local small producer has a special advantage over the large urban producer.

Anything beyond a primary level of education is rare among the small rural industrialists, and so are trade test certificates. Capital formation mainly takes the form of acquisition of new tools (usually second-hand). Typical figures of total capital: £25-50 for a small rural workshop and about £500 for a larger workshop in a small town. The cost per job is thus very small. The market is often limited by rigid concentration on a single type of product and by lack of choice for the customer, as well as by inferior quality due to lack of tools and equipment. Seasonality of rural demand creates difficulties because there is no capacity to carry stocks. Lack of business experience causes breakdown or idleness of precious equipment. Business premises in the rural areas are usually in very poor condition, without proper roofing, floor or walls; in small towns the premises may be better but they may suffer from lack of space, so that stocks overflow into open back yards. The failure rate is high when the scale of operation reaches ten employees, for example, and this creates a barrier between this sector and modern small-scale industry.

Some of the problems faced in promoting this sector will have emerged from the preceding brief sketch. The Kenya Government has developed three programmes to tackle this problem.

Main government schemes

The Rural Industrial Development Programme

Originally linked with the pilot areas selected for the Special Rural Development Programme, the rural industrial development centres to be set up were soon separated and allocated instead to 13 towns distributed over the various regions of the country. The Kenya Industrial Estates Ltd. acted as implementing government agency: the staff of the company surveyed the industrial potential of the various districts and arrived at a list of over 40 products or industries. Some Danish and Norwegian aid was secured. As the first centres are only just becoming operational, there is no actual field experience available.

The first indications are that the centres may become too much like miniature industrial estates instead of assisting the really marginal small producers in the rural areas. In fact, their activities may be geared to the larger and more progressive producers; more or less the same tendency has been noted for the agricultural extension service. Another danger is that attention has been concentrated on impressive buildings rather than on assembling technical personnel. A number of institutions exist which could help the Rural Industrial Development Programme to train its own staff, train entrepreneurs or provide technical services.
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The Industrial Estates Programme

This programme, run by Kenya Industrial Estates Ltd., is designed more for the small urban producer who is close to establishing links with the modern sector than for the rural producer much lower down the scale. Apart from the extension of the Nairobi estate, only one of four others already provided for in the First Development Plan, the Nakuru estate, is now under construction. When that is completed, there will be some 65 to 70 workshop units available, 45 to 50 of them in Nairobi. The items produced on the Nairobi estate seem to be mainly determined by the import substitution strategy depending on protection. The fixed capital cost per job is much higher than for the rural or small-town small-scale producers. Many tenants on the estate are short of working capital and lack supporting technical and advisory services. The high cost would be more easily justified if the estate were to serve as a testing ground for developing technical and managerial services for small producers in rural areas or small towns. The number of units on the estate that benefit directly is only a drop in the ocean.

The small industrial loans scheme

Under its small industrial loans scheme, the Industrial and Commercial Development Corporation provides 8.5 per cent loans, for periods of five to ten years, for the purchase of machinery and equipment. A special fund has been set aside for rural industries.

Long-term action to promote employment

(1) As the three programmes develop, there will be a need to clarify the present division of labour between the Industrial and Commercial Development Corporation, which controls credit supply, and Kenya Industrial Estates Ltd. and the rural industrial development centres, which render other services and examine credit-worthiness. The centres and the estates will need their own loan funds for effective operation. The Corporation would cease to be mainly a credit organisation, and would be responsible for co-ordinating all the small-industry schemes. ¹

(2) There seems a need to co-ordinate action at the local level between the manager of the rural industrial development centre, the provincial loan officer

¹ For further details, see Technical Paper 18, on the management of credit and other services to small-scale African businesses. The report of the working party on small-business development became available only after the mission had completed its work; it suggests the establishment of a small-business development agency under the Industrial and Commercial Development Corporation for the co-operation mentioned above. The recommendations of the working party are in general agreement with the suggestions of the mission.
of the Corporation, the district trade development officer, the district development joint boards and the municipal boards. This need reflects the difficulties of effective horizontal co-ordination for planning at local and district levels.

(3) The subordination of the rural industrial development centres to the industrial estates may prevent the centres from doing their very different job, namely trying to reach the thousands of producers scattered in the rural areas.

(4) Rural producers should be organised in co-operatives and trade associations for such purposes as joint purchase of equipment and joint marketing. Loans should be utilised as an incentive.

(5) The development of subcontracting is of special importance to small producers. We have frequently referred in this report to the desirability of subcontracting links between the formal and informal sectors. Conditions in large-scale industries are not favourable. We have commented in Chapter 9 on the tendency of large firms to develop their own facilities for repairs, maintenance and many other technical services. Nor are many small producers ready, in terms of regular supply, quality control or management experience, to act as subcontractors. Assistance by the larger firms is required, and the larger firms might also take the initiative in providing small producers with lists of items open for subcontracting. Possibly the Ministry of Commerce and Industry should provide an information service. The training of subcontractors could be accepted under the Industrial Training Act as qualifying for exemption from the training levy. Protection and government tender awards could be made conditional upon subcontracting. On experience elsewhere, subcontracting will develop more rapidly at later stages of industrialisation, whereas definite promotion will be needed to develop it now. There is, of course, a risk of abuse of subcontracting as a means of evading protective labour legislation, but appropriate measures might be adopted if and when such abuses occur.

More immediate action

Kenya Industrial Estates Ltd. and the Rural Industrial Development Programme should prepare a scheme for the hire-purchase of machines and equipment for small-scale industry, perhaps on the basis of rates of interest below going market rates.

To improve the poor conditions of premises among small-scale producers, Kenya National Properties Ltd. should be more closely linked with the development of small-scale industry. So far, it has been concentrating on the commercial sector, but it should begin actively to provide for industrial site and service schemes.

1 See Chapter 13.
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The industrial estates and the rural industrial development centres should gather information regarding subcontracting possibilities between smaller and larger enterprises in their localities.

The unit concerned with industrial design, promotion and development at the University of Nairobi should give special attention to problems of small-scale and rural industry.

Product fairs for small-scale industrial products should be held annually, first on a local or regional basis, and then as a national event in Nairobi. All industrialists, as well as artisans and mechanics employed by large firms, should be encouraged to enter their products, and once the quality of the products has been recognised, they should enjoy patent protection.

A special monthly industrial journal should be published in Swahili in order to supply rural industrialists as well as urban small manufacturers with information regarding prices of machines and materials, technical matters, market trends, subcontracting possibilities, etc. The journal could also serve as a forum for an exchange of ideas among small industrialists.

The Ministry of Commerce and Industry should establish an industrial extension service in the Ministry, and make every effort to recruit competent officers for that work. The target should be 500 officers, whom it will be possible to recruit and train only over a number of years. This number should include staff for the urban and rural industrial development centres and the industrial estates. In recruitment, more weight should be given to experience than to educational qualifications.

Government tender policy should be re-examined with a view to re-directing contracts to smaller producers, or making tender awards conditional upon subcontracting to small producers.

Research is urgently needed into the relative efficiency of the various kinds of prototype products made in the rural informal sector. Blueprints of the best models should be selected as a basis for production. In the case of agricultural tools and equipment, this would also increase agricultural efficiency and incomes.

CONSTRUCTION AND HOUSING

Total employment in the construction industry at present is estimated at at least 60,000 man-years, or 20,000–30,000 more than officially reported.

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1 See Technical Paper 18 for the type of staff needed and further details.
2 See also Chapter 13.
3 For further details see Technical Paper 19 on data on construction and housing. The estimate has been derived from estimates of the total wage bill in construction, taken in conjunction with estimated mean wages.
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Taking into account the high proportion of casual workers and the great fluctuation of construction activity, the total number of people directly affected may be in the range of 70,000–80,000. The importance of construction in an employment strategy is also clear from the 40 per cent share of modern construction alone in total capital formation.

The structure of this industry shows the familiar three-tier pattern of the Kenyan economy, with a few large European contractors dominating the large civil engineering projects, and large non-residential building contracts to a lesser extent; the Asian firms mainly with an annual turnover between £10,000 and £400,000, mostly in building; and the African contractors spanning the whole range from the two largest, employing 700-800 workers at the moment, down to the one-man self-employed artisan. In spite of the commendable efforts of the National Construction Corporation, the participation of Africans in housing and construction activity remains very limited.

A basic problem is posed by the height of building costs in relation to the earnings of the urban labour force. The monthly economic rent for the minimum standard modern dwelling in urban areas would absorb up to 75 per cent of the income of the regularly employed unskilled worker—an obviously unrealistic figure. Other problems of the industry include dependence on imported materials, components and machinery, the low efficiency of the mostly unskilled building labour, the critical shortage of management skills in the small and medium-sized firms and the persistent use of design and contractual procedures unsuitable to the realities of local conditions.

In construction, the most important decisions concerning the product are taken at the design stage, before the contractor or producer is identified. "Over-specification" and formal methods of awarding competitive contracts, based on the British system of itemised bills of quantities broken down into hundreds or thousands of items, make the emerging African contractors, whose development is a stated objective of the national development plan, unable to compete within such a system. The new format of the bill of quantities which the Ministry of Works has pioneered is to be welcomed. For public sector building, the use of labour-intensive methods will require a new relationship with contractors which will make it possible to specify the method of executing the work.

More seriously still, insufficient attention is devoted to research into new standards for performance and quality based on the optimum use of local materials and local skills. Instead, standards imported from industrialised countries are simply scaled down; the outcome being a misuse of critically scarce resources and widespread dissatisfaction with the results.¹

¹ See also Technical Paper 8 on employment and technical choice in road construction.
The small amount of vocational training, based as it is on imported objectives and curricula, is found inadequate; at the same time, the conditions under which the construction industry operates (uncertainty about its future role, lack of continuity of demand, delayed payments, insecurity in the supply of building materials) make it unrealistic to expect satisfactory training to be achieved within the industry. The remarkable efforts devoted by the Ministry of Works to training in supervisory skills are not sufficient to meet the requirements of the national construction industry as a whole.

Most construction work is located at the lower end of the technology spectrum. Construction is therefore particularly suitable for individual or collective initiative, of which the Harambee movement is an excellent example. Less appreciated officially are the equally strongly motivated efforts of urban settlers to provide a roof over their heads in and around the growing urban centres. These are perfectly sensible efforts which should be channelled and encouraged. Here again, the misguided application of more modern, higher standards can prevent the tapping of a potential reservoir of personal effort, rudimentary skills and entrepreneurship. Although open to improvement, traditional methods of designing, building and conducting assembly operations have much to be commended; in many cases, they achieve a much greater overall efficiency with the use of local resources than do imported technology and procedures. Research and development in this crucial field is badly needed, in the public sector, in schools and universities, in local communities and in the industry itself. As long as local designs are in fact inferior or considered to be so, it will be politically impossible to change standards. This may be a long-term process which may also have to await the lessening of dependence on expatriate and expatriate-trained professional people.

Recommended policies

Local industries specialising in the manufacture of building components (locks, hinges, doors, floor tiles, pipes, etc.) need to be encouraged. In the public sector this could be done by preparing an approved list of products.

Simplification of designs, standards and specifications is necessary also for the promotion of low-cost housing programmes and site-and-service schemes recommended by the National Assembly Select Committee on Unemployment. The Select Committee has identified the cost of land as a major problem in the way of expanding low-cost housing. However, it is not so much the cost of land as land speculation which poses a real problem. In fact large areas of Crown land (government land) are still available. There seems to be no urgent necessity for a substantial increase in housing expenditures. Instead, there is a need for the redistribution of expenditure towards lower-cost housing
units. For example, the same amount of resources (£7 million was actually spent in the modern sector in 1970) could finance the construction of 1,000 units worth £7,000 each, 7,000 units worth £1,000 each, or 20,000 units worth £350 each. The first price is the selling price of houses under the mortgage schemes sponsored by the National Housing Corporation, the second the average cost of medium-cost housing sponsored by the public sector, and the third the estimated cost of site-and-service schemes. The implications of such a shift of policy in terms of employment and income distribution cannot be easily quantified, yet it is clear beyond doubt that the low-cost housing programme will have a powerful redistributive effect throughout the rural and urban areas of the economy. It is desirable to encourage low-cost housing also for the small-farmer settlement schemes. No doubt site-and-service and low-cost housing raise serious problems of their own, but the price is sufficient to justify a major effort.

Politically there is a gulf between what it is considered fit and proper to aspire to, and what is possible to provide for the mass of the low-income receivers. It is imperative to bridge this gulf by developing a politically acceptable standard of housing which would represent a great improvement for those provided with it and yet remain in the range of £350 a unit rather than the £1,000 figure now often thought to represent acceptable minimum standards. Some 70,000 new families are formed each year, and would cost £70 million to house at £1,000 a unit. In the towns alone, there are each year some 16,000 additional families which it would cost £16 million to house at £1,000. The present expenditure of £7 million can only barely house the urban increment at £350 each, without leaving anything for rural housing or the present backlog. Perhaps the most appropriate approach to meeting the pent-up demand for low-cost housing is through the site-and-service schemes. The provision of basic services (water, sewerage, roads, etc.) ensures a minimum standard of health and social services, while the residents themselves can with assistance erect dwellings to suit their own particular needs and income levels. This approach, therefore, offers a particularly appropriate means of providing low-cost housing. Not only does a flexible approach of this kind offer an opportunity to low-income families to provide their own housing from their own savings through self-help efforts, but it has a very favourable employment effect. The construction methods themselves are simple, allowing a large participation by semi-skilled artisans, small contractors and jobbers, as well as the self-help activities of the family. There are also strong linkage effects back into the informal sector, in so far as the construction of low-cost housing provides a market for such inputs as hand-made bricks and blocks, hand-made windows, door frames, and so on.

Training of counterparts for every expatriate professional worker in the building industry should go some distance towards overcoming skill shortages.
In view of the uncertainty attached to the future of Asian and European contractors, and because of the lack of a sufficient number of qualified African contractors, training in building skills cannot be adequately developed within the industry, and therefore the training functions of the public building and construction bodies need considerable expansion.

The authorities have followed a policy of providing housing to their employees and tenants at a rental which falls far short of its market value, and frequently less than its financial cost. In general, the subsidy proportion increases with the value of the property. This has resulted in a disproportionate investment in relatively costly housing, to the consequent detriment of the lower cost categories. The policy of subsidised public housing has also spilled over into the private sector, encouraging similarly inappropriate standards of housing for equivalent income levels.

Finally, one way to employ a larger gang of labourers in construction is to subcontract the labour management problems to somebody locally. This method has been tried by the Ministry of Works with success. The labour contractor—a well esteemed local person—signs an agreement whereby he commits himself to provide any number of labourers at any point of time and place, of course within given limits and with due (but short) notice. Neither accommodation nor transport is provided by the project authority, and all labour disputes, recruiting and paying off are the responsibility of the labour contractor. Wages are paid through the district commissioner, who makes certain that the workers are paid the agreed rates and checks the contractor's profit. We propose that this method should be adopted on a larger scale as a short-term measure until the Ministry of Works has built up its own staff to deal with building labour.

Action programme

(1) A single government department should be made directly responsible for dealing with the construction industry as a whole, over and beyond its role as a setter of standards and as a customer for part of its output.

(2) The public sector of construction demand, and in particular its decisive purchasing power, should be deliberately used as an instrument for implementing a long-term strategy. This should include the encouragement of the use of locally made materials and components, the development of new contractual procedures adapted to the administrative skills and technical capacities of emerging African contractors, the stabilisation of effective construction demand in areas where it is needed and the training of the supervisory and managerial skills that are so badly needed to develop a domestic construction industry.

(3) The public sector of the industry should set an example to the rest by the collection and monitoring of data on the labour content and direct import
content per unit of construction output, as part of an over-all policy of employment generation and import substitution.

(4) Standards affecting construction should be revised drastically, to bring them into line with local conditions, essential requirements and available technical skills. This applies to contractual procedures, quality standards, specifications for workmanship, etc. It is realised that this will have to be combined with control of standards of workmanship and proper cost control, especially in the public sector.

(5) Private initiative in construction (housing, schools, services etc.), hitherto uncontrolled, should be encouraged wherever it occurs and harnessed to the attainment of reasonable objectives as set by the community. Technical, administrative and financial assistance should be given to such initiative.

(6) Public funds presently allocated to housing should be distributed with over-riding priority given to the satisfaction of basic needs, in particular through site-and-service schemes in urban and semi-urban areas.

(7) Construction targets expressed in clearly defined functional units (bed spaces for housing, student places for schools, bed places for hospitals, etc.) should form an integral part of development planning, which should take account of the limitations of the construction industry in terms of local supply of building materials, local availability of skills and management capacity. Wherever possible, targets and constraints should be set separately for economic regions, in view of the local character of construction activities.

(8) The coverage and presentation of statistics on construction inputs and outputs should be improved, with special emphasis on employment data.

(9) The orientation and content of programmes of technical and professional education should be revised in relation to the future needs of the country and taking into account the consequences of new policies adopted as a result of a new employment-oriented strategy.
The wide range of activities included within services makes it difficult to outline a simple policy to support the general employment strategy. In trade, commerce, transport and banking the growth of future demand will be induced mainly by the growth of commodity production. In services such as tourism, the growth of demand will be largely autonomous, reflecting tastes and trends in personal consumption, both domestic and foreign. For education and health, the growth of demand will be heavily influenced by government policy and finance.

On the supply side, future growth in services is equally difficult to predict, in spite of its quantitative importance for both output and employment. (In 1970, services accounted for just over two-fifths both of monetary gross domestic product and of total employment in the formal sector.) The services sector, like almost all the informal sector, has the capacity to absorb additional labour almost independently of the growth of demand, though when this happens average incomes usually fall. Under the pressure of heavy migration to the towns, this appears to have happened in Kenya in recent years. The share of employment at incomes below 200 sh. per month rose from 1968 to 1970, especially in the wholesale and retail trades.¹ This is what one would expect if the supply of labour is rising faster than the demand for its output.

General lines of government policy

The objectives and instruments of government policy for various sub-sectors of the services sector, e.g. wholesale and retail distribution, transport, tourism and health, are set out in the Development Plan for 1970–74. The main features of government policy which apply to a greater or lesser degree

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to commerce, transport and other services are the promotion of efficient small enterprises, especially through Kenyanisation of transport and commerce, the promotion of self-employment in services that are directly complementary to the growth of commodity production, and adequate specific vocational training for service occupations.

While the mission fully supports these broad lines of action, it believes that the core of a strategy for the services sector should also include a greater stress on the potential for the expansion of social and public services in rural areas. We discuss elsewhere the need to shift government expenditures from the centre to the periphery, as a step towards improving rural amenities.1 Secondly, as we pointed out in Chapter 9, there is also a need to discourage unnecessary mechanisation of such services as banking and retail trade. Thirdly, a conscious and explicit policy is required for the promotion of repair and maintenance facilities. Measures along these lines have obvious implications for the expansion of employment and incomes in services.

Commerce and miscellaneous services

Government policy is more explicit on commerce than on miscellaneous services. The former is controlled and regulated by trade licensing and through government participation in wholesaling. For commerce, the government objectives are—

(a) to reduce the size of wholesale and retail distribution margins, and of commissions in cases in which they are unusually large;
(b) to control, regulate and plan the growth of markets in all areas within municipal boundaries;
(c) to introduce “new provisions of the Trade Licensing Act to make it mandatory for local authorities to draw up plans for local markets before commercial shops are allocated and developed in them”; and
(d) to promote “further Kenyanisation of commerce”.

We examine these objectives and policies below.

Urbanisation and monetisation of the subsistence sector usually results in increased wage employment in such services as wholesale and retail trade. In Kenya this does not seem to have happened. From 1967 to 1970 wage employment declined and self-employment increased.3 This decline in wage employment is due, to some extent, to a rapid increase in average earnings in

1 See Chapter 19.
2 Social, business, recreational and personal; excludes transport, tourism, health, education.
3 See Technical Paper 20.
wholesale and retail trade. Another plausible explanation seems to be the policy of Kenyanisation of trade implemented through the Trade Licensing Act and the Kenya National Trading Corporation, the two major instruments of government action. The Trade Licensing Act may have encouraged the participation of self-employed small African traders by withdrawing trade licences, presumably, from established larger Asian shops with employees.  

Nevertheless, contrary to expectations, the share of self-employment in wholesale trade and in social, business, recreational and personal services is still quite small, but in retail trade it is large. In personal and business services (e.g. those of lawyers, accountants, and advertising agencies), where one would, of course, expect more people to be employed on their own account, the ratios of self-employed persons to wage labour are much lower than those for commerce as a whole.

The incidence of low incomes in miscellaneous services (i.e. in social, business, recreational and personal services) is also more acute than in commerce and transport. More than 50 per cent of those engaged in recreational services earned less than 200 sh. per month. In the case of domestic, hotel, restaurant and other personal services, the share of those below this poverty line was about 74 per cent in 1968, though declining to 58 per cent in 1970.

Although the available information is scanty, it would seem that the greater share of persons in the poorest category employed in personal and other miscellaneous services is due to the lesser degree of government control and regulation of entry into these services than into commerce and transport.

While the encouragement of African participation in wholesaling and retailing is in principle in keeping with our strategy of redistributing income, in practice Kenyanisation appears to protect the monopoly profits of holders of licences under the Trade Licensing Act and the beneficiaries of the discretion which the Kenya National Trading Corporation has to approve wholesale agents. The restrictive licensing policy results in high distribution margins and earnings for the self-employed as well as for wage earners in the formal trade sector.

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1 It is reported that by mid-1971, 1,068 businesses which were formerly owned by non-citizens, with a total turnover of £21 million, had been transferred to citizens (Economic Survey, 1971, p. 55). More recently, withdrawal of another 300 licences was announced.

2 Unless the substitution of citizens for non-citizens is accompanied by a growth of wholesaling and retailing, the effects on employment expansion might in fact be negative. This fear is reinforced by the high failure rate of wholesale distributors and retailers who have been issued with licences under the Kenyanisation policy. The mission was told that out of 800 wholesale agents appointed up to 1969, about 100 had “disappeared” within the same year. Another estimate indicates that at the end of 1970, 10 per cent of the distributors appointed by the Kenya National Trading Corporation had disappeared and another 10 to 20 per cent had gone bankrupt. It was reported to us that some of the wholesale distributors who disappeared had taken to retailing. This suggests that the only way the business could keep operating was to shrink, presumably to a size which fitted the small markets.
Under the Trade Licensing Act, areas (of cities, municipalities and townships) have been classified as "general business areas" where both citizens and non-citizens are allowed to operate. These are mostly central areas in large towns such as Nairobi, Mombasa, Kisumu and Nakuru. Outside these areas, no non-citizens (who are generally well established traders with experience and entrepreneurial talent) are authorised to do business. Thus, although the desirability of entrepreneurial development and training through partnerships between African and non-African businesses was explicitly recognised by the Government in the Development Plan, the smaller towns and the rural areas are deprived of an opportunity of such development. This policy of restricting trading by non-citizens to general business areas is also inconsistent with our strategy of a shift away from the centre to the periphery and the development of rural areas through the promotion of training and entrepreneurship.

Even for the informal sector, most economic activities (e.g. hawking, vending, and shoe repairing) require a trade licence. The mission recommends a liberalisation of such licensing along with the Kenyanisation of trade. Many businesses which now operate outside the law should be enabled to operate without coming into conflict with local or central government legislation.

We believe that the policy of cash payments now followed by the Kenya National Trading Corporation needs to be reconsidered. The provision of credit facilities on the basis of a careful selection of wholesale distributors would be desirable. At present, the system of credit suffers from two main defects, namely lack of an institutionalised system to identify and evaluate the credit-worthiness of distributors, and the separation of credit from other types of assistance. The mission has made a detailed proposal for institutional machinery for the management of credit and other services to small-scale African businesses in general. We also believe that credit to small traders and loans under the district loan scheme need to be linked with further assistance in the construction of premises and regular supplies of goods from wholesalers to retailers, particularly in small towns and rural areas. Government

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2 See Chapter 13.
3 At first the Corporation provided credit facilities to its distributors. After incurring heavy debts this policy had to be abandoned. The current policy of insistence on cash payments for the goods delivered forces businesses to be more liquid than is economically necessary. In the course of trading, several days or months of credit is extended all along the distribution chain, from the manufacturer or importer through the wholesaler and retailer to the consumer. The Corporation's policy breaks this credit chain, thus putting a strain on the distributor who not only has to find cash to make purchases from the Corporation but sometimes must also give credit to retailers so as to retain their custom.
4 See Technical Paper 18 and Chapter 11.

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participation in wholesale trade through the Kenya National Trading Corporation should in principle facilitate regular supplies of commodities to retailers. However, this does not seem to happen at present. The mission recommends that the Corporation should play an active role in marketing: it could undertake transport of goods as well as their storage. Such a service would reduce the transport costs to remote agents, which is otherwise bound to be high since they handle relatively small quantities. Alternatively, consideration needs to be given to utilising Kenya's National Transport Company (KENATCO) for this purpose.

One of the greatest hindrances to the success and growth of small-scale trading is the lack of adequate training facilities. The amount of government resources spent on training is at present quite small; it needs to be expanded in order to avoid business failures. Some efforts are no doubt already being made to improve training: for example, management and entrepreneurship training for small African traders is provided at the management training and advisory centre which receives assistance from the UNDP and the ILO. In the past, however, the nature and scope of training provided by the centre has not been tailored to the needs of small businessmen. Apart from increasing the capacity of the centre for training of small traders, it would also be desirable to ensure co-ordination of this training with credit facilities and market development. Once the new entrepreneurs are granted licences to undertake trading, they are too often left alone to fend for themselves. Follow-up is required in the form of business promotion and advisory services that will be geared to the needs of smaller wholesalers and retailers and will be within their financial means. The mission is aware of the fact that the trade development officers of the Ministry of Commerce and Industry and the management division of the Industrial and Commercial Credit Corporation provide management services and advice to small entrepreneurs. However, these facilities are at present inadequate and need to be considerably strengthened.

Consideration also needs to be given to the possibility of having new Kenyan traders trained by non-citizens whose businesses are likely to be taken over, in return for some compensation to the non-citizens in the form of a training subsidy, a more favourable price for their business or a longer period in which to wind it up. These are some of the incentives on the basis of which the Government's proposal of the formation of partnerships between less experienced African businessmen and experienced non-Africans could be implemented during the current Development Plan period.

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1 For example, a World Bank team noted that the courses were too sophisticated and costly for an average African trader; consulting services were adapted primarily to the needs of large enterprises, and the fee of 24 sh. per consulting hour was higher than most small traders could afford.

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Transport

This sector is not as important in generating employment as commerce and other services. In fact, over the 1965–70 period, over-all employment in the licensed transport sector fell. The fall is accounted for mainly by a decline in the employment for the Railways Corporation. On the other hand, employment in road transport increased. The mission believes that there would be scope for more rapid expansion of employment in road transport if the current restrictions on licensing were lifted. At present, restrictions are imposed on the grant of B licences, which entitle the holder to carry goods for hire as well as for his own business. On the other hand, the issue of C private licences is much more liberal. A licences are to be issued to specialist public carriers who operate only for hire or reward. No such A licence (based on the United Kingdom Road and Rail Traffic Act of 1933) was ever issued in Kenya, since the market for specialised hauliers was very limited. This reflects, to some extent, the inappropriateness of applying standards and regulations of a highly developed country to a developing economy in early stages of development.

The above licensing policy seems to explain the origin of the non-licensed and hence illegal transport activity of the private vehicles that operate as taxis and mini-buses without a public service vehicle licence that entitles operators to carry passengers and freight for hire or reward. This situation seems to us to be a rational reaction of entrepreneurs against the monopolistic position of the public commercial vehicles who in the past have been protected by the very restrictive licensing practices.

In Nairobi City, rough estimates of an inquiry undertaken by the Urban Study Group last year show that there are nearly 400 “pirate” taxis, “stationary” as well as “mobile”. Outside Nairobi, the count is more difficult. It is reported, however, that hundreds of unlicensed taxis operate between Mombasa, Nakuru,

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1 See Technical Paper 20.
2 Under an agreement with the City Council of Nairobi, Kenya Bus Services Ltd. enjoy a monopoly for passenger transport. Any other public vehicle or motor vehicle is therefore prohibited from carrying passengers for hire or reward within the city. There seems to be no economic rationale for the creation of such a monopolistic situation. Very little is known of the reasons for which Kenya Bus Services Ltd. was permitted a monopoly, in spite of the inadequacy of public transport. It is interesting to note that the Chairman of the Transport Licensing Board does not seem to favour the continuance of this monopoly; yet nothing is being done at present to re-examine the agreement. See Sunday Nation (Nairobi), 19 March 1972.
3 Lan Situma and Michael Mogridge: A study of pirate taxi (matatu) operations in Nairobi (Nairobi Urban Study Group, 1971, mimeographed). The “stationary” matatu operates from a fixed terminal. The fare is negotiated with the driver on each trip. “Mobile” taxis, on the other hand, operate on a particular route at a fixed rate per person, and are thus more popular with the public. The former provide a greater personal service in terms of dropping passengers as near as possible to their destination than is provided by official public transport.
Nyeri and Nairobi. The mission was told that over 30 such taxis operate in Nyeri district alone. On the assumption of one driver and one conductor per taxi or mini-bus, the number of persons employed in this informal sector may be roughly estimated at about 1,000.¹

The monopolistic situation and artificial scarcities created by restrictive licensing also explain an increase of black marketing in transport licences. It is alleged that a number of bus companies are operating vehicles with the wrong licences. The established road carriers who have been granted B licences for their fleet find it easier to obtain additional licences than the new applicants, since one vehicle acts as a security for the licensing of the second, and so on. The difficulty of managing a large number of vehicles may lead the owners to sell these licences in the black market or to enter into partnerships with the new applicants who cannot obtain licences directly from the Transport Licensing Board. It is reported that the Board’s licences, which cost about 1,000 sh., are selling in the black market at five times this price.² Two points seem to emerge from this situation. First, the Board does not seem to screen applications to assess whether the applicants for licences can afford either to buy vehicles or to rent them on easy hire-purchase terms. Secondly, the ceiling on the annual issue of licences appears to account for at least part of the high scarcity price in the black market. An alternative to black marketing (which is clearly profitable, especially under conditions of poor enforcement of the law) is for the licence holder to enter into a partnership with an existing operator who can not only buy a vehicle but can also operate it efficiently.

Since 1967, one of the main reasons for maintaining a restrictive licensing policy was to further Kenyanisation. The statement of intent regarding Kenyanisation policy states that only Kenyan citizens will be granted transport licences. Progress in implementing this policy is well illustrated by the rise in African ownership of passenger vehicles from 22 per cent in 1966 to 62 per cent in 1969, and of commercial vehicles for hire from 20 per cent to 64 per cent in the same period.

The mission feels that as a Kenyanisation policy, preferential treatment in licensing would be more effective if accompanied by easier security requirements and hire-purchase terms. At present the government loan schemes do not seem to provide credit facilities to potential road carriers. Instead, the schemes concentrate on the provision of loans to wholesalers and retailers. Besides, the hire-purchase system seems to discriminate against the small African owner-operator by requiring guarantees and high rates of interest.

¹ The figures relate only to the non-licensed, “pirate” taxis and buses. In addition, there are also the push-carts and hand-carts. In 1971 more than 1,000 licences were issued for hand-carts in Mombasa alone.

² Sunday Nation (Nairobi), 19 March 1972.
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Easier hire-purchase terms are available mainly to influential persons with official connections: instead of leading to a wider distribution of incomes among a larger number of small African operators, the exertion of influence results in greater participation of the already well paid civil servants and members of other high-income groups in the transport business. There are some credit facilities already in existence, such as those offered by motor vehicle dealers; however, they are at present quite inadequate.

There is another way in which restriction of road licensing works against the small operators. The structure of the licensing system and the licensing fees clearly penalises the smaller operators with cheaper modes of transport: for example, the licence fee for cheaper diesel-run vehicles is twice the amount of the fee for petrol-driven vehicles of the same tare weight (according to the Traffic Act). In addition, there is a heavier fuel tax on diesel oil.

Correction of these disincentives would be necessary to secure a further increase in the incomes and employment opportunities of small operators. The present policy of restrictions on the number of road vehicles in operation, in terms of types of traffic and geographical limits, may in fact conflict with that of Kenyanisation, and the development of African entrepreneurship, which is one of the objectives of Kenyanisation, may justify lifting of the restrictions even if that step results in increased competition for the railways.¹

Clearly, such substantial changes will have their desired effect only over a long period. Care needs to be taken not to over-liberalise road transport without at the same time lowering the railway tariff, since unless the two policy changes are properly co-ordinated, there might be a danger of diversion of traffic from rail to road transport. As a first step, the restrictive licensing system regarding goods vehicles could be abolished.² Besides, if private vehicles are restricted to carrying only the owner's own goods, the result is not only excess capacity but also reduced scope for subcontracting. Adequate incentives are required to encourage large firms not to use their own transport but to subcontract this work instead to small-scale independent carriers. This could be ensured if, when issuing a road transport licence to an industrial user, the Government were to require that a proportion of the transport operations of the large firms should be subcontracted to the small ones.

¹ If a more liberal licensing of road transport were accompanied by the abolition of the railway differential tariff and a more flexible pricing policy, no loss of rail traffic would be likely to occur. The differential tariff could be replaced by a competitive tariff system under which the level of the tariff was determined by the principle of marginal cost pricing instead of the current system of cross-subsidisation which is not linked to cost or competition.

² The East African Transport Study Group recommended this, as well as the abolition of railway differential tariffs, a few years ago—see "The Economist" Intelligence Unit, London: East African transport study, Summary recommendations (1969), Vol. I. We fully endorse these recommendations.

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The issue of licences to Africans needs to be accompanied by proper training courses in transport technology and management, and by easier hire-purchase terms. A well thought out policy of rationalisation of traffic, in addition to training, should go a long way in protecting the interests of small operators. If these measures are not undertaken, accelerated Kenyanisation may only result in higher failure rates in transport business. It is therefore recommended that the Government should ensure that African licensees are competent by organising short-term training courses on transport technology, cost accounting, management, etc. As proposed by a United Nations mission a few years ago, the issue of a transport licence could be linked with a certificate of competence based on attendance at a short training course. Training could be imparted by a mobile training crew organised by the Ministry of Power and Communications, which is currently responsible for the planning and regulation of road transport. This may be a field for international technical assistance. The proposed small business centres can also play a role in the provision of such training.

Tourism

The growth of tourism, to which the Government is rightly committed in view of the foreign exchange earnings of this sector, induces demand also for urban services, e.g. housing and construction, personal services such as restaurants, hotels, bars and night clubs, and distribution. It is estimated that of the total additional employment of 20,000 attributable to the tourist industry in 1968–74, about 7,000 will be accounted for by employment indirectly created in agriculture and distribution.

However, the manner in which the tourists’ trips and itineraries are organised at present tends to lead to an expansion of the market for the products of enterprises in the formal sector rather than of those in the informal sector. This is not to suggest that the tourists do not purchase locally made handicrafts and curios. However, greater demand for the goods and services of the informal sector could be stimulated by organising the tourist itineraries in such a way that apart from visits to cities, game parks and beaches, tourists are taken also to such centres of domestic products as the Kariokor Market in Nairobi. The mission also fully supports the policy outlined in the Development Plan to develop tourist attractions in rural areas, for example traditional villages and cultural centres in the periphery of large towns.

1 See Chapter 17.
3 It may even be worth examining the feasibility of building small to medium-sized hotels and tourist dwelling units, demand for which may grow in future with the rise in the number of Kenyan tourists.
Labour intensity would be marginally encouraged by our proposal to eliminate the investment allowance, which is in effect a way of subsidising investors, including big foreign companies. It would be better to stimulate this type of investment, if such stimulation is necessary, by loans to Kenyan businessmen. The potential for tourist expansion is so great that elimination of this allowance should not make much difference to the volume of foreign capital coming in, though it would substantially increase tax revenues and reduce the outflow of profits.

The extent of government investment in commercial tourism needs to be determined in the light of over-all investment targets and the returns on alternative uses of government funds. The infrastructure required for tourist promotion would be more economical if there were a better co-ordination and planning of complementary inputs.

Shortage of personnel with the appropriate skills to plan, implement and manage projects in the field of tourism will become an increasingly important limitation. In addition, competition with other countries on the basis of standard of service is likely to increase. For both these reasons, more training of staff at both high and low levels in hotel management and catering is required. The Government could provide assistance in the organisation of training schemes which could be financed by the hotel and restaurant training levy and other similar levies imposed on the industry. Training for other trades, and for government departments such as that dealing with game and national parks, would also be necessary.

With correct policies, receipts from tourism could bring considerable economic benefits to Kenya—especially big increases in foreign exchange receipts and tax revenues. Whether these outweigh the economic and social costs is a matter for political decision in the light of research which badly needs to be carried out so that factual information may be substituted for hearsay. Among the costs to be considered are the influence of tourism on local consumption patterns through imports of inappropriate products, and also the possibility that large-scale tourism could exert an upward pressure on wages in other sectors at the expense of employment.

1 In Chapter II.
2 See Chapter 17.
3 The high cost of a lack of co-ordination can be illustrated by a specific example. The beach access roads now under construction at a high cost at Kilifi and Watamu are premature since water will not be available to service hotels there until at least 1975 and more probably 1977. At an interest rate of 10 per cent, the waste from lack of co-ordination on this project alone is estimated to be about £150,000-250,000.
4 A hotel school is soon to open, and will take over the training of hotel managers now provided at the Polytechnic.
5 We understand that a training levy on the industry has already been agreed on and that the appropriate legislation is in the process of being enacted.
Government employment

The public sector is one of the major sources of employment, accounting for 40 per cent of all wage-earning jobs in the formal sector. Total employment in this sector rose at an annual compound rate of growth of just over 5 per cent from 1964 to 1970. The Second Development Plan (1970–74), envisages growth of “general government” employment during 1968–74 at about the same rate.

Employment has increased much faster in the public sector than in the private non-agricultural sector, where it increased by only 2 per cent, on the average, in the period 1964–70. Several factors can account for this relatively faster expansion. First, in general government services, changes in technology and increases in productivity are inherently much less marked than in the private sector. Secondly, the growing development needs of the economy after it attained national independence may also have had a role to play. Thirdly, the tripartite agreements of 1964 and 1970 also contributed to some expansion of government employment, particularly in 1970.  

Our strategy of a redirection of government expenditure away from the urban centre to the periphery of the country would also imply a relatively faster growth in the demand for technical government services at the local and district levels than for general administration and white-collar jobs in Nairobi. This would be a reversal of past trends.  

At present, the co-ordination between the central and local administrations is very limited. Neither has a technical and development administration emerged at the district and local levels. The planning machinery responsible for drawing up and implementing plans does not extend beyond the provincial administration. As already pointed out in the Ndegwa report, the apparatus of field officers of the various ministries, for example, the provincial planning officers of the Ministry of Finance and Planning, “is not integrated within the context of the national Development Plan”.

The mission fully endorses the recommendation in the Ndegwa report that new posts of district development officer and district planning officer, responsible for plan formulation and implementation at the district level, should be created. Such a structure will strengthen the technical and development administration at the local level and provide for a more effective decentralised planning. Without such machinery, it would be very difficult to implement our strategy and recommendations concerning a shift from the centre

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1 See Technical Paper 26.
2 See also Chapter 19.
to the periphery, the promotion of informal-sector activities and monitoring of the progress made towards the minimum income targets. It is well to recognise that these are matters with which it is not easy to deal: a proper recognition and development of informal activities, for example, will require not only very deliberate changes in attitudes but also a strengthening of local policy and planning machinery.

The switch from central public administration to local government services can be defended on several grounds. In the context of Kenya as in that of many other developing countries, it represents a recognition of the role of technical and development staff (concerned, for instance, with the improvement of health and education, agriculture, commerce and industry, transport and communications) as distinct from that of staff not directly connected with such tasks. It is encouraging to note that in Kenya, unlike many other developing countries, government employment has not been looked upon as an unemployment relief measure. In spite of the introduction of the tripartite agreements, the growth of government employment does not seem to be disproportionately large.

As we note in Chapter 15, on labour market policies, salary levels for clerical jobs have not only not responded to the expansion of the supply of educated manpower; they are also much higher than those in the private sector, at least for secondary-school leavers. Coupled with the over-all limits to government expenditure, this is likely to limit the relative capacity of the government sector to absorb additional manpower unless some special measures are taken. The mission’s proposal that recruitment into public employment could be undertaken at salaries for new entrants below the current rates for a specified period, should enable employment in the public sector to increase faster than what would otherwise be feasible. One of the key areas in which government employment will require considerable expansion (especially in the countryside) is health services. It is to this sector that we now turn.

Health services

The provision of health services has many implications for the employment situation of Kenya. Improvement of the health of the population increases the productivity of individuals. The provision of more effective maternal and child health care linked with the expansion of the family planning programme has important long-term effects on the rate of development of the economy as a whole. Thus it is vital that better access to health facilities be provided over the next decade.

1 See Chapter 16.
### Table 41. Number of government medical officers, by locality and in relation to 1969 population

<table>
<thead>
<tr>
<th>Locality</th>
<th>Government medical officer</th>
<th>Population</th>
<th>Population per medical officer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kenyans</td>
<td>Non-</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kenyans</td>
<td></td>
</tr>
<tr>
<td>Nairobi</td>
<td>95</td>
<td>52</td>
<td>147</td>
</tr>
<tr>
<td>Mombasa, Nakuru, Kisumu</td>
<td>15</td>
<td>31</td>
<td>46</td>
</tr>
<tr>
<td>Other</td>
<td>46</td>
<td>60</td>
<td>106</td>
</tr>
<tr>
<td>Whole country</td>
<td>156</td>
<td>143</td>
<td>299</td>
</tr>
</tbody>
</table>


At present, there is a large private sector highly concentrated in urban areas. This uneven distribution is not confined to the private sector only: in the case of the government sector, the enormous imbalance between the main towns and the rest of the country is even greater than shown in table 41 because the large municipalities provide additional services of their own. The Municipal Council of Nairobi, for instance, employed an additional 48 doctors at the end of 1971.

In part, maldistribution reflects the general understaffing of the basic health services at all levels and in most functional categories of health workers. A survey of rural health units in 1969–70 showed that the standard complement of a rural health centre was 5 qualified staff members—a medical assistant, an auxiliary nurse, an auxiliary midwife, an auxiliary public health or community nurse and a health assistant (sanitarian)—but that no standards of hospital staffing (patient-staff ratio) had then been established. However, only one health centre out of 22 had the standard staff recommended by the Ministry. Only 15 had a medical assistant as team leader, and only 4 had an auxiliary public health nurse. Out of a total of 21 health centres visited, only 5 were supervised regularly from the district level, and 10 had no supervision at all. Similarly the health centre staff for the most part did not supervise the dispensaries. These findings are mentioned to illustrate the urgent need for more supervision at all levels of the health organisation. There is a lack of all types of staff, but especially of staff connected with personal preventive services (maternal and child care).

The Government recognises the shortage of health manpower as its most pressing problem: it is fully aware of the fact that the capacity of present training institutions is insufficient, and a considerable expansion is con-

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Table 42. Projection of employment of some categories of health personnel in the health services of the central Government and of the municipalities, 1972–80

<table>
<thead>
<tr>
<th>Category</th>
<th>1972</th>
<th>1975</th>
<th>1980</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical assistants (certified and registered)</td>
<td>643</td>
<td>925</td>
<td>1200</td>
</tr>
<tr>
<td>Kenya-registered nurses and midwives</td>
<td>1060</td>
<td>1150</td>
<td>1300</td>
</tr>
<tr>
<td>Auxiliary nurses</td>
<td>3000</td>
<td>3040</td>
<td>3600</td>
</tr>
<tr>
<td>Health inspectors</td>
<td>199</td>
<td>235</td>
<td>325</td>
</tr>
<tr>
<td>Health assistants</td>
<td>517</td>
<td>575</td>
<td>750</td>
</tr>
<tr>
<td>Professional hospital supporting staff</td>
<td>357</td>
<td>500</td>
<td>700</td>
</tr>
<tr>
<td>Auxiliary hospital supporting staff</td>
<td>115</td>
<td>180</td>
<td>270</td>
</tr>
</tbody>
</table>

1 Beginning of year in each case. 2 Nurses, midwives, nurse midwives, health visitors, psychiatric nurses—all enrolled; also community nurses and nutritional field workers. 3 Laboratory technologists, pharmacists, radiographers, physiotherapists, occupational therapists, dental technicians. 4 Laboratory and darkroom assistants.

Source: The table was completed with the kind assistance of Mr. A. Ounnarson, Ministry of Health, Planning Unit. It is based on the present staffing situation and projections of output from training institutions, whether existing or identifiable by current plans for up-grading and expansion. The full impact of the expansion so far planned will be felt only by the end of the decade. The table assumes that students from government institutions will have to undertake to serve the Government for at least three years. It must be emphasised that the base-line data cannot at present be established with the accuracy that would be desirable, nor can the assumptions used with regard to wastage and turnover be substantiated at this stage.

templated under the current Development Plan. We give in table 42 over-all projections of future employment in the public health services of the central Government and of the municipalities to illustrate rough orders of magnitude.

Concrete plans also exist for the improvement of the quality of rural services, which for a long time to come will be manned by auxiliaries. It is intended to put more emphasis on their preventive aspect, and on health promotion. The mission recommends that standards of practice should be established in all activities concerning personal preventive care. The standards should be based on operational studies of how best to organise the work of the health team, what task each health worker has to fulfil, and how and when these tasks should be best performed. These studies should define the skills each member of the team should learn, which will affect training at all levels, i.e. including the training of supervisory staff, and will require the introduction of more practical training facilities and a review of curricula and training methods. For this purpose the Ministry of Health wishes to establish six rural pilot training centres for training, operational research and evaluation. The Ministry’s expressed intentions for this training have the full support of the mission.

We also recommend that a co-ordinating body should be established in the Ministry of Health to integrate the control of communicable diseases and the improvement of environmental sanitation with the activities of the basic health services.

There are increasing doubts about the advisability of training a multitude of categories of auxiliary field workers such as enrolled nurses, enrolled mid-
wives and assistant health visitors (auxiliary public health nurses). A review should be undertaken of the desirability of training, on a country-wide basis, a single type of more versatile auxiliary to be called a “community nurse”, and whose functions would be primarily connected with community health. The Government has already declared its intention of reviewing and reorganising its training activities. To allow this intention to be acted upon, a curriculum committee or task force is needed to review and adapt curricula of all the categories of health workers within the framework of the basic health services. This body would work in close co-operation with the co-ordinating body mentioned above.

In addition, as a matter of priority, a health planning body should be established, its most urgent task being to approach systematically the question of the deployment of health manpower.

Owing to the over-all shortage of qualified health manpower, the increased employment of subordinate health staff needs to be considered in order to free qualified personnel, as far as possible, for their professional tasks.

A recent study analysed the activities of one fully staffed rural health centre. Among the recommendations to improve the working efficiency of the centres was one to add at least one more subordinate staff member to assist mainly with clerical duties. Future planning of the deployment of health staff should take this into consideration. It can already be assumed that between 200 and 250 young people with primary-school certificates could be absorbed into the health labour force in the near future to assist in the running of rural health centres alone.

A full staff complement at rural health centres will considerably increase the possibility of mobile services that would hold regular consultations at dispensaries and health posts which could be established by Harambee effort. This would increase the number of people who could benefit from the most essential services.

To strengthen rural services at the next higher administrative level—the district—a more equitable distribution of doctors should be aimed at. The figures in table 41 show that among doctors employed by the Government, 193 are working in towns with over 20,000 inhabitants, as compared with 106 for the whole of the rest of the country. There is, of course, the staffing of the teaching hospital to be considered, and the present under-staffing in general. But with the increasing number of new graduates from the Faculty of Medicine, it would be useful to introduce a scheme according to which every newly qualified doctor, after a certain time at one of the major hospitals, would be required to serve for two years at the district level.¹

¹ See also Chapter 19.
In each district there should be at least two or three doctors, one of them as medical officer of health, responsible for the organisation, administration and supervision of peripheral services. More doctors at district level would therefore not only strengthen and improve rural services but also prevent the tendency among the population to seek medical care at the big centres.

Repair and maintenance

Repair and maintenance are services which tend to be neglected in most developing countries. It is often much easier for the Government to grant a capital allocation in a development budget than to provide annually from recurrent expenditure the funds required to maintain and repair fixed assets and capital equipment; yet resources devoted to the repair and maintenance of roads, houses and bridges and of agricultural and industrial equipment represent productive investment which prolongs the useful life of assets and thus reduces the otherwise extreme scarcity of capital. Moreover, with better maintenance a given total capital stock and other assets can maintain a labour force for a longer period. In addition, several types of repair and maintenance activity, e.g. in construction, tend to be fairly labour-intensive while economical in the use of skills.¹

The development of domestic capacity for specialised repair and maintenance and transport services or the production of spare parts has the multiple advantage of—

(a) helping to develop the local capital goods industry as a spearhead of indigenous technology;

(b) creating a labour-intensive branch of capital goods production;

(c) developing a naturally small-scale and dispersable type of production, suitable for subcontracting and production in the informal sector; and

(d) lowering construction costs for large-scale industry as well as removing a disadvantage of the smaller firms which cannot afford their own facilities; the maintenance of large stocks of equipment also adds to working capital requirements.

While there is a great potential for employment expansion in repair and maintenance services in Kenya, the current facilities are clearly inadequate. In agriculture about half of the tractors and other farm machines are out of order at any one time, mainly owing to the lack of machine operators and repair and maintenance skills. According to one estimate, about £250,000 a year could be saved if 10 per cent of this machinery could be put back into full

¹ For an empirical analysis of labour intensity and skill intensity in manufacturing and related repair and maintenance services in Kenya, see Technical Paper 21.
In industry too, because of the inadequacy of repair and maintenance services, a plant requires a disproportionately large repair and maintenance shop under its roof. Two plants visited by the mission had repair facilities greatly out of proportion to those in corresponding plants in developed countries, so that there was much unused capacity in each.

In 1969 it was found during a survey of rural non-agricultural enterprises that repair and maintenance represented 31 per cent of all manufacturing and processing activities. According to a survey of unregistered urban businesses in 1969–70, repair and maintenance workers constituted 67 per cent of all the manufacturing and processing workers surveyed.

Inspection of four small repair shops in Nairobi indicated that these small enterprises engage in a considerable amount of capital sharing. Expensive equipment such as heavy duty jacks and electric drills are rented by small operators from the relatively large shops. This practice of capital sharing also takes the form of the pooling of funds by independent artisans to purchase equipment the use of which is shared without financial exchanges. Renting of capital equipment allows entry into the repair and maintenance trade with very little capital. Clearly, there is a shortage of capital for the industry as a whole, which could, however, be reduced were there to be an increase in the demand for informal-sector repair and maintenance by equipping centres with more expensive equipment and sharing its use. These centres would also serve as focal points for spreading new techniques.

Besides the encouragement of innovation, the Kenyan economy seems to derive two major advantages, not provided by the formal sector, from repair and maintenance in the informal sector. First, informal-sector artisans utilise capital much more efficiently. This constitutes an important saving as well. Secondly there is greater re-use of spare parts in the informal sector. Because large repair enterprises have freer access to foreign exchange and make considerable profits on marking up new spare parts, they tend to replace parts when this is not absolutely necessary. Artisans in the informal sector must obtain their spares from the large enterprises, where they report paying retail prices. As a consequence, they are induced to stretch the life of spares or pirate them from derelict machinery.

The growth of repair and maintenance facilities is limited by two main factors, namely the high costs of spare parts and poor mechanical skills. In

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2. Working capital requirements are also quite low. A common practice among motor vehicle repairers is to concentrate their activities in an area where disused cars are dumped as a source of spare parts. There is a thriving trade in wrecked vehicles, and considerable ingenuity is shown in adapting parts from one make of vehicle to fit another.
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Kenya, the cost of spares, repairs and maintenance is reported to be as much as 25 per cent of tractor running costs, or about five times the average cost of service and maintenance in a developed country.\(^1\) The local production of spare parts is virtually non-existent, with the result that their price is quite high. Although some effort is being made to overcome the lack of spare parts by rebuilding and local manufacture of belts, nuts and hand tools, the quality of those products is very low. The lack of spare parts is also related to problems arising from Kenyanisation. The repair and maintenance workshops are almost entirely dominated by the Asian community, including a proportion of non-citizens. The uncertainty about the renewal of work permits and the future generally implies that stocks of spare parts are often kept to the minimum to meet basic short-term requirements. Thus the industry is starved of working capital. A delay of several months was reported in the arrival and delivery of spare parts from abroad.

The scarcity of skilled labour is partly due to the lack of opportunity to acquire mechanical skills among Africans who are taking over the industry under the Kenyanisation policy. The danger to watch is that an acceleration of Kenyanisation might not only slow down the pace of the expansion of repair facilities and of engineering workshops but also the speed at which Africans are trained as apprentices. Facilities for training motor mechanics are much below requirements: spare parts and tools required for training are often not available. In view of the great scope for expanding employment opportunities in the repair and maintenance, in particular, of tractors and other agricultural machinery, the expansion of training facilities for new entrants to the trade as well as for the existing operators and mechanics deserves high priority.

The cumbersome licensing procedures also tend to limit the availability of repair and maintenance facilities. Trade licences and work permits specify the exact nature of repairs a workshop is entitled to undertake. For instance, if a workshop undertook to repair or remould a spare part of a motor vehicle brought from a garage, it would be penalised by the licensing authority if such work were not provided for in the licence.

In the light of the foregoing, the mission recommends the following type of short-term measures to provide for expansion of repair and maintenance facilities:

1. Licensing of trade and transport and the issue of work permits could be made conditional on taking on a certain minimum number of Africans as apprentices. Non-citizen Asians who undertake to impart such training should

\(^1\) Report of the Working Party on Agricultural Inputs, op. cit., p. 34.
not be discriminated against: instead, consideration might be given to granting them a training subsidy. Training in mechanical skills could also be provided in the existing railway engineering workshops. The provision of increased training facilities at trade schools and the establishment of mobile training courses would also be desirable to ensure greater and more efficient African participation.

(2) Reduction of restrictions on entry into repair and maintenance work by non-citizens, and the issue of licences more on the basis of economic criteria, e.g. possession of capital and entrepreneurial skills and the ability to pay the licence fee.

(3) Import substitution and the efficient production of spare parts in small-scale engineering workshops in the country needs to be encouraged. In fact, tariffs on imports of intermediate products\(^1\) as well as capital goods should in principle create an incentive for import substitution in spare parts at the same time as it discourages imports of capital goods.

(4) The Government’s current policy of fining needs to be linked with a policy of stimulating demand for repair and maintenance services. This could be achieved by requiring a certificate of roadworthiness which would be renewable periodically.

(5) Encouragement of capital-sharing among enterprises in the informal sector through the provision of expensive equipment for hire by a cluster of repair shops.

\(^1\) See Chapter 16.
Tens of thousands of Kenyan men and women earn their livelihood working in small-scale non-farming activities in towns of all sizes and in rural market centres. With an anticipated increase of 8 per cent in the African urban population in coming years this number will increase absolutely and relatively, for it is not reasonable to imagine that urban employment in the formal sector could grow at the same rate as the population. Therefore, vigorous action must be taken to facilitate employment and raise incomes in the informal sector, where the migrant will seek a livelihood if he cannot find wage employment through the formal recruitment system.

For all its importance as a source of livelihood in Kenya, we know surprisingly little about the informal sector. The only survey data is for small-scale non-agricultural activities in rural areas, where we have a picture of amazingly diverse economic activity. This chapter will concentrate on the urban informal sector, but it should be noted that in 1969, in what was certainly an under-count, there were found to be almost 190,000 men, women and children working in non-agricultural activities in rural areas, of whom over 132,000 were adult self-employed persons, family workers or regular wage employees. Incomes earned in these activities were significantly (about 16 per cent) above those obtained by men and women working as wage labourers on small farms, and markedly above the cash income received by farmers tilling very small plots. From the fragmentary data, incomes of self-employed

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1 See Chapters 2 and 7.

2 For a definition of this sector and a description of its characteristic features, see Introduction and Technical Paper 22.

3 Survey of non-agricultural rural enterprises, 1969, op. cit. See also Chapters 11 and 12 on the informal sectors of industry and services.

4 Ministry of Finance and Planning: Earnings and employment on small farms (unpublished). Most of those engaged in production in the informal sector also had income from farms.
persons in the informal urban sector appear to be substantially above earnings in rural non-agricultural activities, wage employment on small farms, or income in cash and kind from small plots. The data indicate that self-employed income in Nairobi as a whole is about £90 per annum (150 sh. per month), and £60 in squatter areas (100 sh. per month).¹

These rough estimates point to a very important conclusion: for a large portion of the rural population in Kenya, migration to urban areas represents an improvement in current income, irrespective of whether the work found is in the formal or the informal sector. It is not only the high-wage formal-sector job that attracts the potential migrant, but also the income opportunity in the informal sector. Informal-sector employment is undesirable when viewed from above by the formal-sector wage or salary earner, but desirable and an independent source of attraction when viewed from below by the rural immigrant. While we feel that it could be an advantage if the present rate of migration to the towns could be reduced because of the high social costs involved, it appears that this can be achieved only by raising rural incomes in relation to urban incomes, formal and informal. In present circumstances, and if successful, any measures to induce people to go back to the land would result for many in a fall in current income.²

In the absence of survey data, it is difficult to estimate the size of the urban informal sector. In Chapter 3 we estimated its size in Nairobi at just over 30,000 persons. If we assume that the unemployment rate reported for Mombasa by the official survey is correct, and subtract enumerated employment, we obtain a figure of 44,000 in 1969 for that city. Data on commercial licences issued to Africans by the municipal inspector (and allowing for similar unlicensed enterprises) suggest that this is a reasonable estimate.³ Nairobi and Mombasa accounted for 75 per cent of the urban population (population of centres with 2,000 or more inhabitants) in 1969. While we must hesitate to make generalisations covering also the other 25 per cent of the urban population, discussions with municipal officials in smaller towns lead us to conclude that it is reasonable to estimate the urban informal sector to comprise at least 100,000 persons. This estimate is based on the assumption that the unemployment rate for the other urban areas is not significantly different from the weighted


² On inter-relationships between the informal and the formal sectors in urban and rural areas, see Technical Paper 22.

³ There were over 5,500 licences issued or renewed in 1971. An indication that these represented only a portion of enterprises is given by the fact that no licences were issued to grocers with an annual turnover of less than £300.
The informal sector average for Nairobi, Mombasa and Kisumu (11.5 per cent of the urban adult population). Since the estimates for the informal sector in Nairobi and Mombasa are perhaps low, and since the rate of unemployment in small towns is perhaps below that in the three towns surveyed, urban informal-sector employment may total as much as 125,000 persons. If this estimate is close to being correct, informal employment accounted for 25 to 30 per cent of total urban employment in 1969, and 28 to 33 per cent of African urban employment. This seems rather low by comparison with other African countries for which similar data are available. If we include small-scale rural non-agricultural economic activities as part of the informal sector, employment in that sector accounts for 37 to 39 per cent of African adult non-agricultural employment.

The survey of rural non-agricultural activities, as well as fragmentary data from urban areas, contradicts the popular view that the informal sector is made up of what are considered to be the marginally productive activities of such people as petty traders, hawkers and shoeshine boys. In rural areas, 20 per cent of those covered by the survey were in manufacturing and repair activities, and the three largest groups were in tailoring, sawmilling and posho mills. Unfortunately, we do not have similar data for urban areas, but inspections of unauthorised commercial areas in Nairobi and Kisumu and of markets in small towns such as Nyeri, Nanyuki and Isiolo lead us to conclude that similar patterns prevail in the urban informal sector. The street hawker, the bootblack, and the youths idling on street corners are most visible in the squatter settlements, and this may lead observers to overlook the carpenter at work behind his dwelling, the tailor inside an unmarked mud and plaster hut, or the matatu driver who is out earning fares. The important first step in gaining an objective view of the informal sector is to learn about the relevant facts and collect the necessary data. For many individuals and their families, and urban women, the informal sector may provide the only income opportunity that is available. In a striking way it is a parallel to the Harambee, or self-help, movement which has been such a fundamental part of Kenyan social and economic development in the period since the attainment of national independence: in both cases the recognition of unfilled needs generated by social change is followed by individual or group action on a local basis.

The Harambee movement has been predominantly rural and has received government approval and support. Similar adaptation in the urban areas has not been so welcomed by the urban authorities; yet the informal sector has many of the same characteristics and potentials. The Harambee movement relies primarily on the utilisation of human resources, though it has gradually attracted an increasing amount of capital from individuals and from the

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Government. In the same sense, informal-sector activities are based primarily on the work and imagination of individuals. There is little capital mobilised to finance the many ventures undertaken.

Since programmes undertaken officially are seldom completely comprehensive, the informal sector can be viewed as complementary to planned development. Given a framework within which to function, informal economic activity on a small scale can strongly influence the structure of Kenya's economy and can aid in the process of expanding the range of income-producing activities needed for the rapidly growing population. One important distinction between formal and informal activity rests on the fact that the Government recognises the former but not the latter. This sharply restricts access to capital, favourable locations, government aid in the form of loans, subsidies, tariff protection and management training, and many other services among the wide variety provided by the Government. It is to those questions that we now turn.

Past and present government policy

Government policy towards the urban informal sector has in our view contained too few elements of positive support and promotion, and too many elements of inaction, restriction and harassment. This attitude on the part of the central and municipal governments seems connected with three beliefs, namely—

(a) that persons in the informal urban sector are largely temporary inhabitants or occasional migrants, many of whom could be induced to return to rural areas;

(b) that persons in the informal sector are unemployed or sporadically employed, contributing little to urban income, while constituting a significant health, fire, and political hazard; and

(c) that any attempt to improve living conditions in the informal sector would only induce additional migration, and might thus be self-defeating.

To prepare the ground for policy suggestions, it is important to deal with these beliefs, which may stand in the way of more positive action.

Most of the information on squatter settlements in Kenya comes from two surveys in Nairobi, the second conducted with demolition crews virtually on the heels of the data collectors. The information gathered, collected in what would be regarded as perhaps the worst slum area of Nairobi, shows that in 1971 the average length of residence of adults in the squatter settlements was almost nine years, and their average length of residence in Nairobi was 13.6
years. Only 26 per cent of adults had come to Nairobi within the previous five years; the remaining 74 per cent had lived in Nairobi for an average of 16.7 years. It is not surprising, therefore, that two-thirds of the adult inhabitants had come to the squatter areas from other parts of Nairobi, not from the countryside. Over 40 per cent had previously lived in another shanty area, and had in many cases moved because of demolition by the authorities. This evidence casts doubt on the view of the informal-sector population as transitory and only temporarily urban.

The finding that only 27 per cent of the shanty dwellers reported owning land outside Nairobi is relevant to the question whether they could be induced to return to the countryside. Further, this 27 per cent reported that the land they had in the countryside was currently supporting over 3.5 persons per hectare (not counting the portion of the family in Nairobi). It is not surprising, therefore, that 96 per cent of respondents stated that if their houses were demolished, they would remain in Nairobi. This evidence indicates that health, fire, and social dangers created by the situation must be dealt with positively, because punitive measures will only shift the squatter population to different parts of urban areas. A primary reason why the squatter population was so permanent and disinclined to leave Nairobi was that comparatively few were unemployed. Of the adults, 45 per cent were employed for wages, with average incomes in excess of 200 sh. per month, and only 5 per cent described themselves as unemployed.¹

A punitive policy of demolition of squatter settlements only contributes to the low level of housing and sanitation which is characteristic of much of the informal sector. Demolition is a policy that goes back to the earliest days of European rule, when the colonial administration tried unsuccessfully to preserve Nairobi as a White city. In recent years, demolition of squatter villages has been extensive: it appears that in 1968–69 about 10,000 people had their dwellings and shops demolished in Pumwani, and in 1970 another 7,000 people were rendered homeless by slum clearance in Kaburini and Eastleigh. In view of the human suffering and considerable loss of capital involved, such policies are defensible only when combined with positive measures of improvement and promotion. The threat of demolition will also prevent many in the squatter settlements from constructing more substantial dwellings or from improving their existing dwellings. A striking example of this is an area adjoining a recently finished housing estate. By day the land is open, with only a few people to be seen. At night hundreds of families construct tent-like dwellings of cardboard and cloth over stick frames. At sunrise the evidence of human habitation is rapidly hidden again. This extreme example also illustrates

¹ Survey of temporary structures, op. cit.
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the resourcefulness and ingenuity of people in adjusting themselves to the conditions under which they have to live. Policies which are intended to guard against health, fire and social hazards but generate the conditions just described would not seem to be achieving their intended goal.

Other major consequences of the shanty clearance policy which worsen the distribution of income are—

(a) its role in increasing the value of land not cleared, which raises rents;

(b) its creation of a middle class of property owners and landlords through the tenant purchase system; and

(c) its provision of land with amenities at less than market prices to potential investors instead of to the occupiers, through site-and-service schemes.1

As mentioned in Chapter 12, a second major instrument of government policy is the trade licensing system. At present there are very few economic activities not requiring a licence in Nairobi, Mombasa and smaller towns. The present licensing system and its implementation do not appear to be well designed to achieve any of the intended goals, such as protecting the urban population against health hazards. For example, of the 35 types of licence listed in the hawkers and street traders regulations for Nairobi, only 8 could be defined as involving potential health hazards. Many are for the sale of books, shoe repairs, collection of empty bottles, and the like. The licensing system is not a major contributor to municipal revenue, either: in 1971, licences for hawking, trading and other commercial purposes in Nairobi contributed about £30,000 to a municipal budget of approximately £3 million.

One reason why licensing fees contribute so little to revenue is the restrictive issuing policy. There is considerable evidence of a black market in licences of all types, particularly in transport.2 We believe that the main consequences of the licensing system are—

(a) to create monopoly profits for licence holders, either by use or by black market sale; and

(b) to discourage informal-sector investment because of the risk of police action against operators not holding licences.

Policies for informal-sector promotion

We have a number of steps to suggest, in the light of our conviction that—

(a) the informal sector in urban areas will expand in the next 20 years regardless of policies followed;

1 M. A. Tribe; Some aspects of urban housing development in Kenya (1972, mimeographed).
2 See Chapter 12.
The informal sector

(b) the sector provides employment and necessary goods and services for the lower-income groups, and there are no alternative sources of supply for the near future; and

(c) the sector can be a source of future growth as an integral part of an employment strategy.

The policy of slum demolition should be abandoned, except where it is a necessary part of a positive housing and town planning policy. The surveys of the squatter areas indicate that a large number of squatters can afford to build their own housing, given the low-cost housing and site-and-service policies recommended in Chapter 11. 1 With the uncertainty created by the threat of demolition and other policies removed, the standard of housing built privately would rise. Furthermore, there would be a fall in land values, and that would help lower-income groups.

Secondly, the system of trade and commercial licensing should be drastically altered. In cases in which a reasonable and direct influence on health cannot be established, licences should be eliminated. This would reduce the number of licences by 75 per cent. For the remainder, health standards should be maintained by inspection of operation, not by restriction in issuing licences. The only criterion for issuing a licence should be payment of the licensing fee. This would eliminate the black market in licences and the uncertainty faced by non-licensed operators.

Informal-sector operations are more labour-using per unit of output than formal-sector operations. 2 Therefore, an increase in income-earning opportunities would result from a shift in the structure of demand from the latter to the former. There are two broad policies that can be followed to achieve this: because informal-sector products are consumed primarily by the poor and formal-sector products by the well-to-do, the income-equalising policies recommended in our report would help; secondly, in its own consumption and investment expenditures the Government should increase its purchases from the informal sector, either directly or by making government purchases from the formal sector conditional upon subcontracting.

Specifically, to strengthen linkages between the informal and the agricultural sectors, technical research relevant to developing simple agricultural tools should be intensified. From existing evidence we know that such tools are at present being made by joiners and blacksmiths in small rural centres. 3

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1 Section on construction and housing.
2 In cases in which informal-sector operations also use more capital per unit of output, they are inefficient, and shifts from the formal sector should be very carefully scrutinised if a trade-off between employment and efficiency is involved. We are assuming that there is a wide range of operations in which the informal sector uses less capital per unit of output, or can be made to do so with an upgrading of techniques.
3 See Chapters 7, 11, and 12.
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Technical aid and research is required to develop and encourage the production of producer goods used in the informal sector itself to supply blacksmiths, carpenters, clothing makers, vehicle repair and maintenance shops and the construction trades. Research into techniques for producing in the informal sector intermediate goods for use within the sector—into leather tanning and sawmilling, for example—is of crucial importance.

Measures are recommended to induce firms in the formal sector to subcontract labour-intensive processes, particularly transport, construction, repair and marketing. Firms could receive tax relief for the training of Kenyan entrepreneurs who would provide these and other productive services on a contract basis. Training by firms could be combined with loans from the Government to the entrepreneurs for part of the capital costs of setting up in business. The industrial estates could be part of such a programme. Instead of the Government's stipulating products for industrial estate programmes, large firms could be approached to designate processes which they would be willing to have applied by entrepreneurs operating on the estates. This would help to deal with two major problems in the industrial estate programme, namely—

(a) the frequent lack of linkage for the products produced on the estates; and
(b) the difficulties in marketing the products.

Continuing technical assistance could be provided through the large firms. Foreign firms seeking to begin operations in Kenya should be required to submit specific proposals, incorporating continuing technical assistance, for subcontracting to small, Kenyan-owned enterprises.

The Government Tender Board should be directed to conduct an enquiry into which products and services purchased by the authorities, at various levels, could be obtained from enterprises in the informal sector. Promising examples are repair and maintenance, transport, catering and construction. The de facto policy of awarding construction contracts to enterprises paying less than official minimum wages could be made official, while the minimum wage could continue to be enforced in firms above a certain size (defined in terms of capital assets). In addition, the present system of payment by government purchase orders, which discriminates against small suppliers, should be abolished in favour of direct payment. At the present time delays of six months to a year after delivery of goods or completion of contract work can result.

1 See also Chapter 11. The subcontracting system remains to be developed in Kenya. There are a few examples of subcontracting between enterprises, however. In the Nairobi industrial estate a shoelace manufacturer supplies his products to a large manufacturer of shoes, a manufacturer of hinges supplies various types of hinges to furniture makers, and a button-maker supplies buttons to a producer of ready-made garments.
While large suppliers can carry such outstanding accounts receivable, small suppliers cannot, and therefore often do not bother to tender for contracts. Under present rules, Kenyan suppliers receive a 5 per cent preference in competing with overseas suppliers on government procurement contracts. This preference hardly counterbalances the protection enjoyed by overseas operators\(^1\), and should be raised considerably. Finally, if the recommendations contained elsewhere in this report \(^2\) on spreading public services more equitably over income groups and regions of the country are followed, shifts in government procurement policy follow naturally.

In the chapter on technology \(^3\) we have emphasised the importance of a policy relating to the choice of products. The specific policies listed above will have most impact when combined with serious attention to choice of products and distribution of income. The formal private-sector products that require sophisticated technology for quality reasons are less likely to provide much scope for subcontracting and intermediate inputs.

Much preference for the products of large enterprise is the consequence of irrelevant requirements for standardisation of specifications and quality. Relaxation of such requirements would provide much scope for small enterprise—for example, in supplying furniture for government offices and for the homes of civil servants and university staff. This is not to suggest that quality considerations should be ignored altogether. To make the subcontracting system work, there would have to be some control over the quality of products, and a regular supply.

One general point of central importance must also be made. Quite understandably, the Government of Kenya wish to provide the people of the country with the highest possible quality of social services. This desire is made all the more acute by a colonial history during most of which Africans were second-class citizens in their own country, and were provided with fewer social services at standards far below those enjoyed by the expatriates. It is therefore understandable that any suggestion of dilution of standards should awaken memories of an earlier two-tiered system. Yet we feel that present policy, for all its intentions, is somewhat at variance with the goal of providing satisfactory services for as many people as possible. Tragically, in an attempt to provide high-quality commodities, housing and services, the two-tiered system has been maintained. In view of Kenya’s level of wealth, the concentration of private and public resources on goods and services of a standard adopted in much richer countries amounts in practice to a policy of high quality for the

\(^1\) See Chapters 11 and 17.
\(^2\) In Chapters 12, 16, 18 and 19.
\(^3\) Chapter 9.
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few and little or nothing for the many. To redress this situation, more relevant standards for housing, products, health\(^1\) and transport must be adopted.

In the past such a suggestion has sometimes been interpreted as calling for a lowering of standards. This is false. There is at present a system of dual standards—very high for the formal sector and none for the informal. Establishing and implementing relevant standards would result in raising standards for the overwhelming majority of Kenyans, thus raising the average of all. It is the present concentration of resources on excessively high standards of housing, health, and products which prevents standards from being raised for the majority of the population. The construction of council housing in Nairobi at a cost of several thousands of pounds per unit for a few hundred families, while thousands live in the shanty towns, is not conducive to maintaining high standards.

\(^1\) A district health inspector in North-East Province demonstrated clearly the extent to which standards are transferred unamended from wealthy countries. He was issued the same inspection manual as that used in London, containing regulations on such subjects as minimum temperatures for factories.
In the light of the stated objectives of educational policy, there is no doubt that since independence progress towards these objectives has been considerable, at least in quantitative terms. The number of enrolments at all levels of education has risen tremendously, as has the number of graduates. Progress in literacy may be judged from the fact that primary-school enrolments increased by over 60 per cent—from about 900,000 in 1963 to 1.5 million in 1970. Secondary-school enrolments rose more than fourfold, from 30,000 in 1963 to almost 130,000 in 1970, and the proportion of Africans in secondary-school enrolment went up from a bare 40 per cent in 1963 to 90 per cent in 1970. The number of enrolments at the tertiary level has also increased dramatically.

If the present system and trends in education were to continue, enrolments by 1985 would amount to 3.9 million in primary education, 350,000 in secondary schools, and around 15,000 in tertiary education (see table 43).  

Taken together, these developments suggest not only a general rise in the level of literacy but also a qualitative improvement in the educational attainment of the population, since the rate of increase in enrolments at the higher levels has tended to be greater than that at the lower. These are significant successes by any account, which have been made possible by a combination of favourable circumstances. Since the early years of the independence struggle, the people of Kenya have been unusually alive to the importance of education for political emancipation and economic development. Since independence, Government has successfully channelled this enthusiasm so that the people, through local government and self-help efforts, have contributed

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Table 43. Enrolments for primary and secondary education, 1963–85

<table>
<thead>
<tr>
<th>Level</th>
<th>1963</th>
<th>1970</th>
<th>1985 (projected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>900 000</td>
<td>1 400 000</td>
<td>3 900 000</td>
</tr>
<tr>
<td>Secondary</td>
<td>35 000</td>
<td>145 000</td>
<td>350 000</td>
</tr>
</tbody>
</table>

Source: See footnote 1 on page 233.

enormously to the expansion of education—much more so than in most other developing countries. The extent of local voluntary effort may be appreciated from the fact that, in 1970, enrolments in unaided secondary schools (mainly Harambee schools) accounted for over 40 per cent of total secondary-school enrolments.

Although much progress has been made, certain serious issues nevertheless remain unresolved. Paradoxically, one of them stems precisely from the very success of local self-help effort in education and training. Its implications have been considerable: such, indeed, that the shadow of local enthusiasm has tended very effectively to obscure the substance of national priorities. Largely owing to such local effort, the planned enrolment targets of primary and secondary education have continuously been exceeded.

For political and other reasons, the Ministry of Education has felt it necessary to take over quickly as many Harambee schools as possible, in spite of Plan targets. Public expenditure on education and training has thus tended to exceed Plan estimates, and already close to 20 per cent of the budget is devoted to supporting the existing educational structure. To this must be added the vast expenditure of private resources encouraged by the lure of education. All this has contributed to the explosion in the output of school leavers at all levels and exacerbated the school leaver problem. Moreover, because localities and local governments have been unequally endowed with financial and other resources, inequalities in the distribution of educational facilities and in the quality of education between districts and provinces have increased.

The apparent runaway enrolment figures in primary and secondary schools have also tended to complicate the planning of teacher training, since such training has normally been geared to school enrolments as projected in the Plan. Since the trained teachers are bonded or directed primarily to Government-aided schools, the education gap in standards between these and the unaided schools tends to widen. This has certainly contributed to dramatic

1 See Chapter 4.
differences in rates of examination success. In 1967, for example, maintained schools had a success rate of 55 per cent in the Kenya junior secondary examination, as against only 35 per cent by Harambee schools and 25 per cent by other private schools. In 1970 close to 65 per cent of candidates from aided schools passed the school certificate examination, compared with less than 30 per cent of those from unaided schools.

This leads us beyond questions of numbers and into the crucial areas of the structure and content of education linked to the examination and selection system.

A brief review of Kenya's examination and selection system, and more particularly of the certificate of primary education, is essential if one is to grasp properly the dominating effect of repeaters in standard 7, as well as the way in which primary schools function. The flows of primary-school leavers through the examination and selection systems are indicated very roughly in figure 1.

At present, about 14 per cent of candidates are offered places in the Government-maintained secondary schools. Most of these continue their formal education for four years and then sit the East African certificate of education examination. Another 14 per cent enter unaided Harambee schools, but a large

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1 A "standard" in Kenyan primary schools corresponds to a "form" in secondary schools.
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A handful of these manage to obtain places in government secondary schools after sitting the Kenya junior secondary examination at the end of form 2, and a few more enter teacher training colleges. Although it is extremely difficult to obtain reliable figures on the proportion of candidates for the certificate of primary education who repeat the examination in the following or subsequent years, a figure of 35 per cent would probably be not far wrong as an estimate. The remaining 35 per cent are the primary-school leavers, who neither continue their formal education nor repeat standard 7. These we identified in Chapter 4. We saw that most of them settle down to some form of activity; but because those activities are mainly within the informal sector of the economy, the leavers may continue to regard themselves as jobseekers or even as unemployed.

In Technical Paper 25 we show clearly that the central weakness of the certificate of primary education is its almost exclusive orientation towards selection for secondary school. It largely ignores the needs of pupils for whom primary education will be terminal. The reasons why this has come about are understandable. Since independence, competition for secondary-school entry has steadily intensified. The simplest way of making the examination more difficult is to increase the proportion of items requiring specialised knowledge. Moreover, most of the people responsible for the certificate have been recruited from secondary teaching and are naturally concerned to ensure a continued supply of high-calibre recruits to the secondary schools. In this they have been bolstered by the manpower planners, who until quite recently have been preoccupied by the need to provide for Kenya’s high-level manpower needs, particularly in occupations still dominated by expatriates.

Whatever the reasons, the result has been that the syllabus of upper primary schools and, particularly, the certificate of primary education, have become overloaded with topics that are the proper concern of the secondary schools. A case could be made for this if secondary-school selection were thereby improved: that is, if the certificate of primary education made possible a more accurate prediction of which pupils would make best use of secondary-level places. But, as shown in Technical Paper 25, the certificate does not even do this. For example, in the mathematics paper, it is precisely the items that explore secondary-level skills that are the least efficient as selective devices.

Coming back to the repeater problem in standard 7, the data we present in Technical Paper 25 suggest that these repeaters tend to be pupils who have passed through the lower classes without repeating. The most successful pupils are those who come straight through the lower standards, and then repeat

1 Largely because many Harambee secondary schools have only two forms.
standard 7. There is thus a major pay-off to this extra year: pupils who repeat standard 7 have a much better chance of entering a maintained secondary school than those who do not.

All this begins to indicate that the problem of youth employment does not lie so much in the numbers of primary-school leavers: it lies much more in the whole philosophy of education, which mentally prepares the pupils for formal, non-rural employment in the context of an economy which has failed to generate enough employment opportunities of this sort; and in the foreseeable future this will continue to be so, unless there are fundamental changes both inside the school and outside.

We do not wish to deny the importance of the attempts at change that are already under way. In the primary schools, for example, there have been impressive attempts to broaden the curriculum: in the first place, by adopting a freer approach to teaching in which children are encouraged to be more spontaneous and to draw on their environment; and in the second place, by adding a rural aspect to the science course. But these efforts to change the curriculum are largely nullified by the examination system. The questions related to agriculture in the examination for the certificate of primary education in 1971 accounted for 17 marks out of a potential 250 (50 for mathematics, 100 for English, 100 for history, geography, science and nature study). Clearly, the weight given to a subject in the examination, and the form the questions take, define the method and content of teaching. This is known as the “backwash effect” of the examination structure. Good teachers, it is true, may attempt to counteract the ill effects; but, inevitably, they must give first priority to getting their pupils through the examination with the best possible marks. What this means is that a changed curriculum cannot produce by itself a change in skills and values and that the role of the examination and selection structure is crucial in what happens in the school. “Who is afraid of the certificate of primary education?” asks one of the inspectors of the Ministry of Education. The answer is: anybody concerned with reorganising education to meet the needs of young school leavers who are forced to look for their livelihood in the rural areas and in the informal sector of the economy.

Naturally, there have been attempts to develop alternative approaches to education and training in Kenya. In recent years many of the youth centres, which were originally conceived to provide alternative education at the primary-school level, have begun to extend their activities to providing craft training for primary-school leavers and drop-outs. More significantly, the village poly-

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1 Here is an example of a question related to agriculture in the examination for the certificate of primary education: “A substance which is found in many fertilisers is: A. Humus; B. Nitrogen; C. Magnesium; D. Calcium.”
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technics, although few in number and still largely in an experimental phase of
development, have begun to focus on the all-round needs (craft skills, agricul-
tural knowledge, small-scale business management and general economic
understanding) of young people forced to look for their future livelihood in
the rural areas.

A government prevocational training youth programme is now projected
which will build upon the youth centres and village polytechnics in order to
create an integrated network of prevocational youth training projects. It is
aimed at closing the gap between the rapidly increasing numbers of primary-
educated youngsters and the very limited opportunities for wage earning or
further education by orienting young people towards opportunities on the land
and in informal economic activity. In particular, there is an emphasis on skills
and knowledge that will enable young people to play an active and productive
role in the development of their own home area.

These are important initiatives, but as conceived at present they reflect
very clearly the rather unfortunate dichotomy which has grown up between
formal education and non-formal education. Thus we must say with some
emphasis that, as long as the formal education system operates as it does with
its very close ties to the examination-selection system, attempts to gain popu-
ularity for a separate non-formal system of education without such ties will
have little impact. Formal education will continue to dominate mainstream
selection for the positions of prestige, influence and wealth. Ironically, informal
education, in its concern for the lives of the great mass of people, will remain
on the side and, in the present situation, must largely remain there. Yet a
new approach to integrating education and training activities (building where
possible on self-help and other local efforts) is obviously needed.

As long as education refers only to the present formal method of academic
instruction directed towards the uncertain mastery of a body of abstract
knowledge which is periodically measured by the existing examination system,
Harambee schools will strive to imitate the conventional academic second-
ary school, village polytechnics will tend to become conventional vocational
schools, and so on. And this is unavoidable, because it is the rational thing to
do as long as incentives are as at present.

A viable alternative to the present system

In Kenya today, the school system provides about 50 per cent 1 of the
young generation with seven years of basic academic teaching, preparing them

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1 And not 70 per cent as a superficial reading of the statistics might lead one to believe. These statistics do not take account of the repeater problem.
for a problematic entry into secondary academic institutions. However, only about 15 per cent manage to continue their formal educational career, leaving 85 per cent of the young people of the country to find their own way towards developing their skills and knowledge for employment through other agencies of education and training.

Reacting to this situation, popular opinion quite naturally presses for more expansion of the formal school system, although an increasing interest is being taken in technical subjects. This fits into the over-riding concern for wage-earning jobs; and it is therefore essential to distinguish between the Harambee technical institutes, with their massive popular backing, and the village polytechnics with their marginal self-help support. The former promise formal training for formal-sector technicians, or even technologists, for whom there is an important but relatively small and not clearly defined demand. The technical institutes are clearly very attractive. The village polytechnics, with their orientation towards the rural handyman, may also be attractive to those who cannot afford or find anything better, but do little to touch the imagination of the mass of the people in a way that leads to real Harambee.

This distinction is very important because it brings clearly into the open the pressures building up in the total educational scene to formalise and ritualise the more technical and vocational types of education and training. It thus admits the failure of society at large to diversify and re-channel some of this newly awakened interest in employment-oriented education into areas of the economy where most of the potential for employment actually lies—small-scale farming and the social infrastructure at the local level.

Before we present our policy proposals, another constraint must be mentioned: the constraint of resources. We are not thinking only of the unavoidable financial constraints, which are serious enough, but rather of constraints of real resources and in particular the teaching staff. At present, the teaching force in primary schools is 25 per cent untrained; 60 per cent lack any basic secondary education, and only 13 per cent have a general educational level of school certificate or above. In the secondary schools, local graduates in mathematics and science are still very few indeed. Any proposal for educational reform must clearly take these circumstances into account.

But what, then, would be a viable alternative? Before turning to our long-term policy proposals, we should explain their purpose. There is inevitably a conflict between making clear and radical proposals in order to set in motion a process of debate and re-conceptualisation, and making more carefully checked recommendations which take all the present problems of implementation fully into account. Our approach to this problem is clear. We believe that the need for fundamental reform of the educational system in Kenya is so great that proposals should not be shelved simply because all the details
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have not been worked out. The proposals are made in the much wider focus of this report and are part of a change of strategy in many directions. Our concerns are with raising productive employment and ensuring an easier and less frustrating transition from school to work. As a part of this objective, and as a means for attaining it, our strategy is directed towards—

(1) Income distribution. In line with the general thrust of the report on problems of equality and income distribution, there is a need to redistribute the provision of education and training, so that skills and knowledge are more widely and more equitably dispersed.

(2) Efficient production of skills and knowledge. It is clearly essential to relate education and training at each level to the needs of terminal students, i.e. the majority leaving to try to find employment, rather than the minority continuing in the system.¹

(3) Aspirations. In our proposals we shall concentrate on reducing the effects of competition for the higher levels of education and preferred employment, in particular its backwash effects upon the content and style of teaching in the schools. The problem of aspirations in general cannot be tackled by the school alone.²

(4) Finally, in relation to all the above concerns, it is essential to see education and training as continuous activities and to recognise that, while childhood and youth can be used as helpful categories in making educational decisions, children and young people are members of communities. Thus, education and training provisions should focus on their community and family membership, not separate them from it in some form of alien institution.

Bureaucratic institutions tend to set objectives which support their own existence. As part of this process, in Kenyan schools today children have to memorise that nitrogen is a component of fertilisers in order to pass examinations, but are isolated from the farm in doing so. Teachers may worry about this as citizens, but in their working roles they tend to judge by the criteria of their profession and press a professional case for more funds, more status, more authority. Even the briefest look at Kenya’s educational budget will demonstrate that attempts to continue school development in its present form will lead to an ever widening claim on scarce resources, a greater ritualisation of teaching, and, ultimately, the type of slow dislocation of the educational process currently being reflected in many of the poorer Harambee secondary schools. It cannot be argued too strongly that educational development should

¹ See Technical Paper 25.
² See Chapter 15.

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cease to be judged purely in terms of the criteria used by the education profession.

Education must be developed to support the basic activities of life. Thus the learning that takes place in the home, on the farm and at the workbench must be blended with, not set in opposition to, that which takes place in the school. In order to attain a broad, cohesive educational and training policy, the school as a purely educational institution should increase its flexibility to meet the needs of the family and the workplace. If this comment reflects the failure of the school to touch the real needs of rural life, it also reflects the failure of other agencies of communication, training and welfare, including health, community development and agricultural extension services.

We can summarise the above by stating that our policy proposals are directed towards two major objectives: equity and employment. We first present in summary form the educational and training model towards which in one way or another we think Kenya must move. We shall then elaborate on certain of its basic characteristics.

The proposed system

The salient features of our proposals are the following. Kenya needs to embark on a long-term and fundamental reconstruction of its whole educational system. Changes of structure, coverage, content and quality are long overdue, especially from the viewpoint of employment strategy. While we have not had time to explore all the possibilities in detail, we have explored the elements of a structure which, as far as we can judge, would go a long way towards remedying many of the present deficiencies. The main elements of the system we propose are as follows:

1. One cycle of basic education of 8 to 9 years’ duration, covering present primary and lower secondary education; this basic educational cycle to be universal and free.

2. Elimination of the present examination for the certificate of primary education, which is to be replaced by a completely revised testing procedure at the end of lower secondary school, i.e. at the end of the 8 to 9 years’ cycle.

3. Minimisation of the repeat rate.

4. Gradual increase in the proportion of the curriculum devoted to pre-vocational subjects: from a modest proportion in the last years of existing primary education to a heavy bias in the content of the last 2 years of the 8 to 9 years’ cycle. Thus, emphasis would be put on the interests of the terminal pupils.
(5) Entry into upper secondary education to take place according to a quota. The size of the quota to be determined by two criteria—costs, and national demands for skilled manpower. Individual opportunities to be based upon the new testing procedure at the end of the basic cycle.

(6) Duration of upper secondary education to be 2 years.

(7) Upper secondary education to be comprehensive, with streams catering for general, commercial, technical and agricultural subject emphasis. Care must be taken to integrate the various streams into a single examination-test system to be administered at the end of the 2-year cycle.

(8) Entry into pre-university classes—of 1 to 2 years' duration—according to same criteria as mentioned under (5) above.

(9) This would by the same token put an end to the uncontrolled expansion of certain courses at the university level, in particular many of the arts courses.

(10) It should be established as a principle that all persons successfully completing upper secondary education must give one year of community service to the rural areas on a subsistence-level pay scale. This would be a prerequisite for entry to higher education. Further, all those successfully completing higher education would give a second year of service as part of the programme leading to their final qualification. This would also help to solve many of the staffing problems implied in our proposals.

(11) Building-up of a series of second-chance institutions catering for drop-outs and adults. These schools would be of the village polytechnic and technical institute types. They would be based largely on Harambee and other local efforts. As their name indicates, they would be specifically geared to recuperating those who have either missed the education boat or have fallen out of it. This also implies that special quotas be established for the graduates of these institutions to accede to the upper secondary and university levels of education. These second-chance institutions could also be used to phase into employment the school leavers from the basic cycle.

These are the basic characteristics of our educational and training model or strategy. We call this a long-term strategy only because it will take time to carry it out completely—even if implementation starts right away, as it should.

Let us now look at the strategy in more detail.

We argue in favour of greater emphasis on basic education for more people and for more years, but of a type completely different in outlook and content. If the curriculum, textbooks and practical work for the basic cycle are devised with the rural situation and rural development in mind, the foundation will have been laid for a better and more widespread rural advance. This, through higher productivity, would yield higher real incomes, not only for the
rural population but for the economy as a whole. At the moment, even the relatively high growth rate which the Kenyan economy has experienced in the last few years has had limited impact on the vast majority of the rural population. An effective cycle of general basic education, laying the foundation that ultimately promotes higher productivity in the rural areas, would not only raise incomes for the average citizen but would also make food and raw materials available cheaply for the urban formal sectors of industry and commerce. If, in addition, the current imbalances in primary education were removed, the country would have laid the foundation for meeting the equally important social (as well as political) objective of universal literacy.

Our model in full operation assumes universal and free education during the basic cycle. The abolition of school fees is essential as a first step towards equal educational opportunities. But the heavy cost of such abolition will need to be borne in mind, and a more equitable way of raising education finance must be found. It is also partly a consideration of the cost that has led us to be rather flexible with respect to the duration of the basic cycle: 8 or 9 years. If 8 years were to be chosen, this could be accompanied by a raising of the entry age from 6 to 7. However, this question is not unrelated to the examination issue, to which we now turn.

We have shown earlier that the examination and selection procedure is one of the most crucial issues in any reform of education and training in this country. What is needed is a change, so that the certificate of primary education is no longer the sole arbiter of a child's educational destiny. There are a number of ways in which this might be achieved during the transition period, but here we are concerned with a description of how our long-run model would work. There is clearly no place for a selection mechanism in the middle of our basic cycle; therefore, the examination for the certificate of primary education will be a thing of the past (as will the Kenya junior secondary examination). Instead, a special testing service must be established. Ideally, this process of testing should focus on aptitudes much more than is the case at present. Tests must be developed that are sensitive to backwash effects, using items related to the objectives of our terminal-oriented basic educational cycle. At the same time, by focusing on reasoning they should ensure that such items do provide as reliable and valid a basis as possible for selection for upper secondary education.

By raising the average age at which the first selection takes place, the harmful effects of the present age heterogeneity on the efficiency and equity

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1 It will also be obvious that this can only be done gradually.
2 It should focus on three types of skills in line with the needs of terminal students: basic skills, reasoning skills and practical skills.
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of secondary-school selection could be reduced. We know that any reasoning test score for a person under 15 is virtually meaningless as a measure of ability unless it is related to age. This is one of the reasons for raising the entry age. However, increasing the school entry age would mean reversing the present trend, which is for a higher and higher proportion of pupils to start school as soon as possible after their sixth birthday, or even earlier.¹ Parents, particularly educated parents, are so concerned about their children's education that one may ask whether they would accept the later starting age voluntarily. Enforcement might well have to be delayed until birth registration is compulsory.

Of course, this argument would lose its force if it were possible to establish nursery schools for pre-primary pupils on a national basis. But here again there are serious problems. The difficulties of establishing a distinctive pattern of nursery education and of training teachers to carry it out would be such that a high proportion of the nursery schools might well become no more than downward extensions of the primary schools—teaching pupils of much the same age much the same subjects, by much the same methods, as are found at present in the bottom two primary standards. The major difference might well be that the teachers were of lower calibre. There is already far too strong a tendency to push the weakest teachers into the lowest classes: children who are receiving their first exposure to education need to be taught by teachers who are at least as skilled as those teaching the higher standards. Research in Uganda has shown that the effects of inferior elementary education are largely irreversible at the secondary level: the quality of the early educational experience tends to set a limit to the level the pupil will ultimately attain.² Given the resource constraints, the expansion of high-quality nurseries should be related to the possibility of financing them.

It is only after the root cause of the disease affecting the present functioning of the schools (i.e. the existing examination structure) has been eliminated that a change in the content of education begins to make sense. The pedagogical content of the basic cycle must be restructured in two ways. First, classroom teaching must become less dependent on rote learning and become realistically associated with the pupil's everyday experiences. Such an approach will necessitate a re-conceptualisation of the teaching role, which will take the teacher into the community to help pupils develop their skills in reading, writing and number work as part of normal community life. This has been said before, but it has also proved very difficult to achieve in practice because it places new intellectual and physical demands upon the teacher while at the

¹ Schools in Nairobi accept pupils at 5½.
same time removing his institutional props—the classroom, and the status and authority gained by his isolation in it. We would be inclined to go as far as to suggest that actual teacher-contact time be reduced progressively, and that children be encouraged to work on their own or with other people in the locality, so that by the time the basic cycle is over those who leave school will not experience such a clear break in their lives.

In the first years of basic education, children would be led to think of their homes and the local community as a context in which to develop skills and general knowledge. Older children would need to develop skills and knowledge more immediately oriented to employment in their community. This is the second structural change we have in mind. During the later years of the primary section, but more particularly in the lower secondary section of the basic cycle, the handling of tools and the idea of measurement and perspective should be covered in preparation for picking up skills more quickly after school. Thus, the lower secondary cycle would be deliberately geared to school leaving. Pupils would attend lessons on a part-time basis only, and families would be encouraged to provide these young people with opportunities to help on the family farm, to learn useful skills from relatives and friends, and to become apprenticed to any family trading enterprise. Skill learning and projects would be organised around these activities. Indeed, the school catchment community would be asked to help in this process by making resources and opportunities available, and by arranging programmes of community work in which youngsters might take part.

At the end of the basic educational cycle, a quota system should be introduced to ensure that opportunities in further education are equitably distributed. Two types of quota are needed, namely—

(1) A district quota. At present some districts obtain more than their fair share of secondary-school entrants, largely because their primary schools are better. We suggest that for each district a quota be established, indicating the proportion of primary-school leavers to be given secondary-school places. During the transition period to universal basic education the districts which have hitherto been under-represented at secondary school would be given larger quotas than the better-off districts. When universal basic education was achieved, quotas would be the same for all districts.

1 See Technical Paper 24. In Chapter 18 we make proposals for removing imbalances, in schools and other facilities, between districts and provinces.

2 Alternatively, a standard quota could be set for all districts, but expressed as a proportion of the numbers of children in the total age group rather than as a proportion of school attenders. In this way less favoured districts would automatically receive an advantage, but the advantage would diminish and finally disappear as Kenya approached universal primary education.
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(2) A school quota, within each district. At present there are wide discrepancies in the proportion of pupils entering secondary schools from different primary schools, even within the same district. From some schools not a single candidate is successful, while from others as many as 50 per cent gain secondary-school places, even when the candidates come from virtually identical backgrounds. A school quota system, by which a fixed proportion of leavers from all primary schools in a district would enter secondary school, would clearly be more equitable. Moreover, it would reduce the present excessive competition between schools and encourage teachers to give more attention to their less able pupils than they do at present. In time, the system might also tend to reduce quality differences among primary schools. Intelligent pupils would no longer have an incentive to move to areas where they can attend high-quality schools. They would tend to remain in their home area for their primary education, even if the school were weak; and this in turn would attract better teachers. Thus the quality of the poorer schools would tend to rise.

The size of the district quotas would vary: however, within any one district the school and district quotas would, of course, be the same.

One obvious disadvantage of the school quota system is that it would penalise the good schools. It would reduce the incentive of the best teachers to strive for excellence. It would also focus competition on a candidate’s fellow students within the school, instead of on some larger, essentially anonymous group outside it, and might thus reduce the motivation of border-line pupils.

These disadvantages could be removed at least partly if, in addition to the basic school quota, there were also for each school a bonus quota, dependent on the over-all performance of the school in the selection examination. The bonus system might work in the following way (although there are, of course, many alternatives):

(1) During his last year at school each pupil would prepare an individual project, based on the study of some practical problem or topic of interest in his home area. Projects could cover a wide variety of topics, ranging from simple crop trials to accounts of local historical events.

(2) The pupils to enter secondary school under the basic school quota would be selected on the results of the objective multiple-choice papers. This would mean that from all schools within a district a fixed proportion of candidates would enter secondary school under the basic quota.

(3) The decision as to which pupils would enter secondary school under the bonus quota would depend mainly on the quality of the individual projects. By confining assessment of individual projects to border-line candidates, the
burden of marking would be substantially reduced. And because the projects would be so important in determining who went to secondary school, both teachers and pupils would treat them seriously. Practical, locally oriented education would quickly become a key constituent in the basic cycle curriculum.

In terms of the content of upper secondary education, we argue in favour of a 2-year section during which agriculture, technical training and more academically oriented training are running parallel. Some of these courses would be given sufficient flexibility to link them with the second-chance institutions. Thus, further upgrading would be secured for successful workers and would at the same time strengthen the building-up of skills and knowledge related to local development and leadership.

At the end of this 2-year cycle the final selection takes place to determine who continues, after a year of community service, to the pre-university section and to university. No further selection will therefore take place after the pre-university course. As indicated earlier, special care must be taken in devising an examination-test structure at the end of upper secondary education which will minimise discrimination between the various streams (agriculture, technical, general, and so on).

A re-structured university would be needed with a focus on excellence, not as a restricted academic goal but as a requirement in a broad range of tasks. Naturally, the opportunity to learn highly sophisticated skills must be maintained, but this would not be the over-riding purpose of the university. It would be a polyvalent institution serving the needs of academic learning and technology, on a full- and part-time basis, including the wider needs of second-chance institutions and adult education. During the first part of the university course, balance and breadth would be maintained so that all students developed basic intellectual competence in mathematics, language and development studies. Specialisation would take place in the second part of the course, but the numbers for each specialised course would be limited, so that relatively less emphasis would be put on turning out specialised geographers, historians, etc. and more on mathematics, sciences and other skills in demand.\footnote{For some specific remarks on engineering education, see Technical Paper 9.} Again, a proportion of university places would be reserved for students entering by the second-chance route.

As we said earlier, universal basic education is going to be very difficult to implement, given teacher supply and costs as well as the changes required in the content of education. It is therefore proposed that at the end of the upper secondary education all pupils should serve the community in their home area for a minimum period of one year as an integral part of their
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educational career. This community service could be undertaken in a number of areas: in the rural works programme, as an enumerator for a statistical field survey, as a clerical assistant at a health centre, as a teacher in an adult class or in basic education. They would receive a short induction course of two to four weeks, according to their destination: the two sections of basic education, the various forms of second-chance institutions, or other types of community service. This establishes the principle that successful pupils in privileged levels of education will give one year of teaching to basic education and of assistance to society, at reduced rates of pay. Apart from easing the resources constraint, this measure has the additional advantage of being in line with the general philosophy underlying our proposals, i.e. of establishing a close link between the products of education and training and their environment. The process would be repeated for those completing university education.

A very important and integral part of our educational and training model is the idea of second-chance institutes. This is well in accord with the equity and employment objectives of our policy proposals. Clearly, even at the time when our model is in full operation, early school leavers and drop-outs are not going to disappear magically. Also, we know that intellectual development and maturation vary among individuals. Moreover, given the tremendous potential of local self-help efforts, an attempt must be made to use this movement constructively. We can see no more constructive use than to channel these efforts into the elaboration of institutions of the village polytechnic type and Harambee technical institutes, and this with two purposes in mind. First, to recuperate drop-outs and other early leavers of all ages, in order to get them back into the mainstream of education and employment opportunities. Secondly, to help those young people leaving the mainstream of education with phasing into employment, if this proves to be necessary.

It must be expressly stipulated that a given proportion of the places available in upper secondary schools and at the university will be earmarked for school leavers from these second-chance institutes. There is no place in our model for two systems, one formal and high-prestige and the other informal and low-prestige. This inevitably gives rise to the frustrations we witness at present. Our model contains one integrated and complementary system, with freer flows of people between its various components.

Because this idea of second-chance institutions is central to our strategy, it is important that we avoid possible misunderstandings. A first objective of these institutions is to integrate as much as possible the various types of non-formal training, adult education and formal education by taking advantage of

1 We do not rule out the use of secondary-school leavers in some aspects of secondary-school teaching. This was a practice shortly after independence, with excellent results for both teacher and taught.
the self-help efforts. If this is achieved, the second objective of minimising the negative effects of the existing dichotomy between various parallel routes of education and training will also be attained. The third objective is to be instrumental in the transition from education to employment. But in this connection it must be emphasised that priority will be given to the opposite flow, that is, of persons from work back to education and training. After all, there exists a whole variety of short training courses which are useful for the school-employment flow.

The transition

Fundamental changes on the lines we have just outlined need to be implemented as soon as possible. But it would obviously be unrealistic even to envisage that the whole package will be implemented and functioning overnight. There are constraints of many kinds, the more important of which we have mentioned earlier. In the meantime, the existing machine will bulldozer onwards: young people will have bad schooling or none, the examination structure will continue to dominate curriculum and teaching methods, ad hoc attempts will continue to be made with parallel types of training to compensate for some of the deficiencies of the formal education system. It is therefore important to consider immediate measures which, without going the whole way, are steps in the right direction, deal with the most immediate and urgent problems, and take care as much as possible of those who will continue to miss the boat.

It is not possible, nor is it necessary at this stage, to give a detailed account of what the transition from the present situation to the proposed model may be like. But we feel that the presentation of a few important examples of immediate measures is indispensable in order to illustrate the kind of transition period we have in mind.

Not surprisingly, we start with a possible transition measure to cope with the examination for the certificate of primary education. There are a number of ways of reducing immediately the importance which the certificate has in a child's educational and career chances. The method that could be most easily and quickly implemented would be to use the Kenya junior secondary examination as a subsidiary selection tool. That examination, set at the end of form 2, is mainly an examination for Harambee school pupils. It was originally conceived as a leaving certificate for pupils with a partial secondary education, useful for seeking employment in jobs which do not require a full secondary education. With the recent substantial rise in the number of holders of the certificate, other uses could be developed. For example, that certificate could be used as the basis for training programmes which could take into account the child's particular needs. It might also be useful at the planning stage to adapt the UNESCO educational simulation model, mentioned earlier, to help assess the consequences of alternative educational structures and pupil flows.
East African certificate of education, however, very few employers or training institutions now recruit pupils who have merely passed the Kenya junior secondary examination. The result is that most Harambee schools attempt to offer a full course for the East African certificate, although few have the teachers and equipment to do so.

In theory, it has always been possible for a Harambee school leaver having passed the Kenya junior secondary examination with superior results to obtain a place in a Government-maintained form 3. However, in practice this seems to happen rarely. We were told by a Harambee school teacher that he had spent much of his Easter vacation in 1972 visiting maintained secondary schools and officials, trying to place three of his pupils who had all obtained results in the junior secondary examination well above the average level reached in maintained schools. He failed to find places for any of them.

If each year sufficient new places were made available at the form 3 level in maintained schools to absorb perhaps 10 per cent of the pupils from Harambee schools who have passed the junior secondary examination, there would be at least three major benefits:

1. Selection efficiency would be greatly improved. The junior secondary examination covers a wider range of subjects than does the examination for the certificate of primary education, and pupils have had two more years of education, so that their attainment is likely to be a more accurate indication of their ultimate level.

2. The repeater problem at the top end of the primary school would be eased considerably. Harambee school education would be a much more attractive alternative to repeating than it is at the present.

3. Harambee schools would acquire a real and distinctive role within the educational system, and one which they would be capable of filling. They would become two-year second-chance junior secondary schools, rather than pale imitations of government secondary schools, as they are at present. There would be for the first time a real return to the huge inputs of capital and organisational skill which have gone into their construction.

Over a period of time, the intake into form 3 of pupils who have passed the junior secondary examination could be progressively increased and the intake of pupils who hold the certificate of primary education could be correspondingly reduced. Ultimately, when resources are available, the certificate would be abolished altogether, the Harambee schools (many of which are at present adjacent to primary schools) converted into low-cost junior secondary-school sections of our basic cycle, and every pupil offered basic education for 8 to 9 years in his home area.
Our second example relates to the immediate school leaver problem. Here, there is no doubt in our minds that the existing parallel routes—known as informal education and training activities—must be integrated around their most promising elements and considerably fortified. This is essential if our model is to become a reality, and in any case an urgent necessity in the face of the school leaver problem. The village polytechnics should become the focal points for the involvement of people in their community. They should become the focal point for agricultural extension, rural works programmes, correspondence courses, business education, radio programmes, community study, nutrition and health education programmes, and so on. This would, of course, result in a revised programme of training of the village polytechnic type, which is precisely what we have in mind.

This proposal relates particularly to the early leavers and drop-outs and to their phasing into employment. This is a very sensitive and complex organisational problem. In each area, individual youths will have many different resources, opportunities, aspirations and levels of maturation. Support in different forms will thus be needed, and a very flexible pattern of organisation will have to be developed, of the type just proposed.

For those persons, young and old, with no or very little formal education, it is proposed to abandon the present literacy classes and to introduce functional literacy instead, even if this means closing down present adult education activities for a while to regroup rather than to extend resources. The functional literacy programmes would consist of activities directed to numeracy and literacy, and activities related to the local economy in terms of agriculture, health, handicrafts, and the like. In line with the approach adopted throughout, the intention of such a programme is to enable this group of people to make full and better use of extension services and local resources for development.

Conclusion

In dealing with such broad and complex subjects as education, training and youth, this chapter has deliberately focused on what we consider to be the central problem areas. We have avoided going into details and secondary issues. For this reason the approach has had to be general, almost visionary in places. This has been necessary in order to concentrate on the major characteristics of the education and training model towards which we believe Kenya should start moving.

While the general approach seems broadly on the right lines, it will be obvious that a good deal of thinking remains to be done to work out the details and the possibilities of these proposals. To this end, we strongly recommend that a commission be created composed of Kenyans from various ministries,
the University, and other national bodies and institutions. The Ministry of Finance and Planning could take the initiative to set up a working party.

In making this recommendation, we are conscious of the risks of initiating another round of discussions on educational policy and taking pressure off the urgent need for implementing change. For this reason, an alternative approach would be to set up a working secretariat in place of the commission proposed above. The working secretariat would be located in the Ministry of Education, but would draw staff in part from other ministries and outside bodies. It would be charged both with working out the details of the proposals for educational reform and with initiating and monitoring their implementation.

But are such fundamental changes in the education system necessary—and would they be possible?

Anyone who doubts whether such changes are necessary should ponder a few minutes what education achieves at present: not what education achieves for the lucky few who succeed, but what it does for the many, the majority, the average students and those below average. How long can Kenya go on offering a system of education which promises one thing but rewards the hopes of so many with disillusion?

But is change possible? Quantitatively, Kenyan education since independence has gone through unrecognisable changes, far beyond what was thought possible in the early 1960s. Qualitatively, a similar challenge lies ahead—the task of the 1970s. Are the changes required now any more impossible to bring about than the changes of the 1960s?
LABOUR MARKET POLICIES

The functioning of the labour market in general and the prevailing structure of incentives in particular are two vital links in an employment-oriented development strategy. If the signals prevailing in the labour market point, and continue to point, in one direction and if the proposed policy changes in fields such as education point in another, serious contradictions arise. Our task is therefore to examine labour market policies and to see what complementary changes are necessary, in line with changes proposed elsewhere.

Clearly, labour market policies are related primarily to the formal sector of the economy. Informal-sector labour markets are almost by definition unregulated and, for the most part, fairly competitive. This is not to say that the Government's market policies have no influence on what is happening in the informal sector, but the effects are mainly indirect.

The wage and salary structure

At the outset, it must be said that there is little public discussion about the role of the wage and salary structure in influencing the demand for jobs, in stimulating migration, in determining the supply of and demand for different skills, and in affecting the intensity of effort put into work performance. These issues have of course been discussed, but not in proportion to their fundamental significance for Kenyan development.

The average earnings of clerical and skilled workers are shown in table 44. Although at the beginning of their career skilled workers appear to have an advantage over clerical workers, the latter pick up quickly and at mid-career earn twice as much as skilled workers. These income prospects clearly explain much about the choice of education and about the job expectations of school leavers.
Indeed, if one looks at the kinds of job opportunity available to Africans in the formal sector in the past, and the high level of their remuneration as compared with traditional occupations, the emphasis placed upon formal academic education, with a strong bias towards arts courses, was a rational response by parents and children. Even when a lottery element appeared in the attainment of jobs, as the result of over-supply, the prizes were so glittering that the gamble was still justified. Salary levels for administrative-clerical jobs have remained unaffected by the rapid expansion of educated manpower. Neither relative scarcity nor intrinsic merit would seem to explain the fact that a shorthand typist in Government (certainly not always trained for high-quality work) can earn £489–690 per year, that is, 8 to 12 times the average income of 80 per cent of the rural population. Even less justification can be found for the salaries of an administrative assistant in a town clerk’s department (£1,104–1,392 per year), or a clerk grade I (£804–1,092 per year) requiring just two credits in the examination for the East African certificate of education.

The unduly high expectations and actual rewards for academic education extend to the lower-grade service occupations. Is there really such a difference in the efficiency of police constables who have reached form 4 without obtaining the school certificate or the East African certificate of education as to warrant paying them 460 sh. per month, when those of the same age who had to leave school after gaining their certificate of primary education receive only 305 sh.? Once again the desire of students to obtain education can be seen to be a perfectly rational choice and not merely a reflection of wrongly oriented educational structures and curricula.

Even in the skilled craft trades, the “paper qualifications syndrome” is being fostered. An assistant trade instructor in government service is paid £690–972 per year if he has a City and Guilds certificate. Yet a man who has been making fishing boats for years in Kaloka earns only £120 per year, and another who machines, welds and assembles maize mills in Kisumu receives £126. Such disparities inevitably breed frustration and social tensions, and lead to desperate efforts by farmers and other important groups to break out of the vicious circle of greater effort for a lower income. Energy is dissipated in striving for academic success, even by those who are not cut out for it, or in the intensification of the network of ethnic and regional loyalties, nepotism and political influence, which seem to be the principal alternatives (or complementary approaches) to the academic ladder for gaining a place in the over-privileged sector.

It is useful at this point to mention some of the major conclusions of the International Bank for Reconstruction and Development study from which the data in table 44 were taken, because they confirm the more impressionistic
examples just mentioned and thus generalise the conclusions reached with respect to the link between the structure of incentives and educational policy. First, the increase in income resulting from additional schooling amounts to 36.2 sh. per month for each year of additional schooling. Secondly, those who attended public general secondary schools average 135 sh. more per month than those who went to private general secondary schools. Thirdly, although the difference in the earnings of those who completed four years of schooling and those who completed seven years but did not pass the examination for the certificate of primary education is extremely slight, once this examination is passed the average income increases considerably. Fourthly, the public sector is paying much higher salaries than the private sector for those who completed secondary school (at the educational level of nine years of schooling the public sector pays on average 145 sh. per month more than the private sector). Fifthly, in the case of farm labourers there was no link between education and income.

The conclusion, according to the evidence available, is clearly that the signals in the labour market stimulate current educational choices and job aspirations. If the financial rewards remain as they are, the educational strategy outlined in Chapter 14 would be extremely difficult to implement, or would lose much of its potential impact. For this and other reasons, the incentives struc-
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ture must be corrected by an appropriate incomes and wage policy. This is dealt with in more detail in Chapter 16.

Minimum wages and hours of work

For the most part, wages and conditions of employment are fixed through wages councils established in connection with specific trades, industries or occupations. This is a flexible system, which makes it possible to tailor conditions of work to the different conditions of each industry. But it has also entailed substantial differences in employment conditions between agriculture and industry and among various industries within the formal sector. Not only minimum wages but also hours of work, rest days, holidays, annual leave, sick leave, maternity leave and other conditions of employment differ from one industry to another. This multi-dimensional type of regulation has led to a distortion of incentives, with adverse effects on horizontal labour mobility. People working in industries where benefits and conditions of work are more favourable tend to hold on to their jobs, and this prevents the proper functioning of the labour market. A long-term policy designed to achieve greater harmonisation of working conditions, and to set the various industries on a path which would in due course lead to more uniformity in conditions of employment, would definitely help to foster occupational mobility. This recommendation is in keeping with the deliberate policy followed by the Industrial Court to reduce wage differentials among workers of varying skills.¹

In terms of working hours, the differences are considerable. Between the 54 hours provided for by the hotel and catering industries and the 38½ fixed with respect to postal, telegraph and telephone services, there are at least four different work weeks. The differences are still more striking when one considers the number of hours of work by occupation and realises the contrast between the agricultural sector, where the hours of work of herdsmen, milkers and watchmen, for instance, were set at 72 spread over seven days, and the formal urban sector, where some clerical employees, for instance, worked only 41 hours.²

The statutory minimum wage for adult male employees in Nairobi was 150 sh. per month in 1963. In July 1966 this minimum wage was raised to 175 sh. per month, and that is still the formal rate at the moment of writing. Although there has been no general revision of minimum wages since 1966, there have been partial “breakthroughs”. For example, the Commission on

¹ See University of Nairobi, Institute for Development Studies; The Industrial Court in Kenya: An economic analysis, by Dharam Ghai and Charles Hollen, Discussion Paper No. 73 (1968), p. 7. See also Cases Nos. 6 and 7, 1971, of the Industrial Court.
² See also Technical Paper 27.
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Public Service Structure and Remuneration recommended an increase in minimum wages in the public sector to 200 sh. per month. Also, in July 1971, the regulation of wages for the laundry, cleaning and dyeing trades established basic consolidated minimum wages (for labourers, messengers, tea makers and folders) of 241 sh. in Nairobi and Mombasa, and of 218 sh. in all other areas. This compares with average earnings in agriculture of 125 sh. per month in 1970, and minimum wages in the rural areas of 70 sh. per month for unskilled male workers and of 50 sh. for female unskilled workers.

Some comment should be made on the operation of the wages councils responsible for the establishment of minimum wages. Since the recommendations made by these councils are the result of an internal process of negotiation that takes place within the councils, and since these recommendations are usually endorsed by the Government, the regulation of minimum wages has shown some similarities with collective bargaining. Kenya has thus developed a two-tier system of negotiations whereby not only collective agreements but also wages orders fix the levels of remuneration for the formal urban and agricultural sector. This system has the advantage that the parties concerned agree to the level of remuneration and feel committed to it. It may also have certain implications: on the one hand, with regard to the level of remuneration of people with little or no bargaining power; and, on the other hand, with respect to the proposals designed to expand the scope of incomes policy with a view to including the operation of wages councils within the purview of a policy of wage restraint. There is, however, an alternative to this extension of incomes policy, namely the reorientation of the present system of fixing minimum wages towards a more objective approach based on an investigation of family needs and increases in cost of living. Such a policy would require the following preliminary steps—

(a) the strengthening of the role of the independent member of a council, so as to bring the notion of national interest into the operation of the wages councils;
(b) the establishment of appropriate research and supporting services within the Ministry of Labour; and
(c) the co-ordination of minimum wage fixing machinery with the existing mechanism for the control of prices.

Given the broadened role of the Industrial Court envisaged in Chapter 16, it is recommended that all changes in minimum wage regulations be approved by it.

Industrial relations

Unlike protective labour legislation, industrial relations have been considerably influenced by post-independence developments. Early legislation on trade
unions and labour disputes, which followed the British model, was quickly reshaped in an effort to adapt systems and institutions to what were considered to be the needs of an independent and developing country. At present, the system could well be defined as a blend of voluntarism and government concern for development. Voluntarism is best represented by the Industrial Relations Charter signed in 1962 by the Government of Kenya and the employers' and trade unions' representatives. Concern for development is exemplified by the existence of the Industrial Court, originally established as a tripartite institution and now composed of Government-appointed independent members. The Charter aimed at promoting recognition of unions, consultation and cooperation, freedom of association and peaceful settlement of disputes. Some of its provisions have been superseded by subsequent legislation, but the spirit of tripartism and the theme of cooperation which are at the heart of the Charter are still very much alive. The Industrial Court, in turn, was established to settle the trade disputes referred to it jointly by the parties or by the Minister for Labour. The Court is empowered to make final and binding awards on the basis of its own inquiries and without violating existing written laws. In the exercise of its powers under the Trade Disputes (Amendment) Act, the Industrial Court is bound by any guidelines or other directives relating to wage and salary levels and other terms and conditions of employment that may be issued from time to time to the Court by the minister for the time being responsible for finance. Moreover, the President of the Court has declared that the Industrial Court "should always accord the national interest a paramount importance in all its deliberations". Employment implications have also weighed heavily in the Court decisions.

It is obvious that the successful functioning of a system based on voluntarism and concern for national interest is based to a large extent on the existence of strong and responsible employers' and workers' organisations. In 1972 there were 16 employers' organisations registered in the Ministry of Labour. Most of these associations are affiliated with the Federation of Kenya Employers, which also accepts individual firms as members. The Federation has an influential voice on the industrial relations scene and provides services of various kinds, including assistance in negotiations and information on law and practice.

1 Act No. 22 of 1971, section 5.10.
3 Ghai and Hollen, op. cit., p. 11.
4 Other important organisations, such as the Chamber of Commerce, are active in fields other than industrial relations.
By 1972 the trade union movement had succeeded in organising some 25 per cent of the total force of wage earners in Kenya and roughly 40 per cent of the total number of wage earners in the formal sector. Trade unions are organised on an industry-wide basis, though demarcation lines are not always clearly drawn. All trade union organisations (except the civil servants' union and the teachers' associations) belong to a unified confederation established in 1965, namely the Central Organisation of Trade Unions (COTU). The Organisation was in fact the offshoot of a series of measures adopted by the Government with a view to avoiding rivalry within the labour movement following a period of acute instability. These measures provided, inter alia, for the appointment of the General Secretary by the President of the Republic from a panel of three names submitted to him by the Governing Council of the Organisation, and for prior approval by the Government of any decision concerning international affiliations. On the other hand, a check-off system was instituted under the 1965 law, thereby allowing unions to strengthen their financial position and to embark on various programmes of social welfare. The idea behind these measures was that stability among workers would contribute towards stability of the whole nation and towards re-invigorating the economy.

These indications of organisational strength on the part of unions and employers are important for a full understanding of their role in an industrial relations system that is bound to serve as a negotiating forum for the solution of the manifold problems inherent in the expansion of the labour market. They are also important in connection with the possible use of industrial and labour relations as a means of bridging the gap between rural and urban levels of income. It is hoped that increased trade union activities in the rural sector may help to bring about an improvement in the working and living conditions of rural workers. Trade unions can profit from their experience in organising the working class in order to help the weaker sections of the rural population to set up appropriate organisations able to act both as interest groups and as development institutions; these organisations should contribute to a better articulation of needs and demands in the rural sector. They could exert effective pressure when necessary, to protect the interests of small farmers, casual workers and landless labour, and in general to achieve a higher degree of social and economic equality in the rural sector.

1 It should be noted that the existing legal framework entails potential government control over the top level of the trade union structure, though in practice there is little government intervention in the administration of COTU and of individual unions. See D. O. Brownwood: Trade unions in Kenya (Lower Kabete, 1969), p. 3.
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Information and participation

The letters to Kenya newspapers show—if such additional evidence were needed—how deeply felt and widespread are the frustrations caused by the absence of a service providing fairer access to jobs for those without personal connections or other special advantages. For this reason, the development and improvement of government employment services should be a matter of much higher priority than is the case at present.

Two types of formal employment services exist, namely government employment offices providing services free to employers and workers, and private agencies charging a fee and commission.

The employment offices (exchanges and the Nairobi labour office for women), as well as the Kenyanisation of Personnel Bureau, try to bring workers and employers together and reduce frictional unemployment; but their impact is limited and not very effective. First, employment offices do not exist in all parts of the country (only 23 exist; their number has remained almost constant over the last 15 years or so), and the labour market in the areas not covered thus remains largely unorganised. Secondly, even where employment offices exist, neither the employers nor the jobseekers make full use of them. It is the general complaint of these offices that very few vacancies are notified to them by the employers. Recruitment at the factory gate or through friends, relatives or factory personnel officers is more the general rule than the exception.\(^1\) In Technical Paper 28 we show that only about 7 per cent of the jobseekers obtained their first jobs through labour exchanges.\(^2\)

Organised as they are at present, the employment exchanges have not been very successful in establishing a meaningful employment market information programme. The only employment market data collected by the employment exchanges concern the number of jobseekers registered with them, vacancies notified by employers and placements made. In the light of what we said earlier, it can be imagined how incomplete this information is, and how erroneous it would be to draw any conclusions from it.

One of the important functions of an employment service organisation is to collect regular “signals” from the labour market about the demand and supply situation and their interaction, assess and analyse them and then transmit them to those concerned with manpower, employment, educational and general economic development policies. If collected and analysed correctly and regularly, employment market information can serve a very useful

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\(^1\) See also Technical Paper 23.

\(^2\) Based on H. Rempel, op. cit.; the figure refers to male migrants into urban centres.
purpose in the orientation and implementation of various economic and social policies. Neither the employment exchanges (including the labour office for women), nor the Kenyanisation of Personnel Bureau is performing this important function. The employment exchanges do prepare monthly reports, but these are of a routine and administrative nature. The collection of the employment market data is not properly organised; in fact, there is no full comprehension of the nature of work involved and its importance. Even the imperfect data collected are not fully analysed, and those that are analysed are not disseminated regularly and in time. The Ministry of Labour publishes the employment exchange statistics only in its annual reports, which have a time lag of two to three years. This is most inadequate, since these reports have information of considerable interest and value for policy formulation.

The entire administrative organisation of the employment service needs to be thoroughly examined with a view to evolving uniform procedure and removing the present defects, namely duplication and overlapping of registration in different employment service organisations, different time-limits for the renewal of registration, lapses in submission of registered applicants for placement according to a well defined priority system, weeding out the records of those who do not renew registration, proper follow-up action to ensure that more vacancies are notified to exchanges, and so on, and that they are not by-passed. The question of the utilisation of employment offices should be discussed as often as necessary in the appropriate tripartite bodies, and moral pressure should be brought to bear on employers. It should also be impressed upon the employers that not only casual and temporary jobs but also regular and permanent jobs should be referred to employment offices for placement. As the tripartite Labour Advisory Board set up in the Ministry of Labour is a large body and cannot be convened at regular intervals, it is suggested that a tripartite subcommittee of the Advisory Board be set up to consider the functioning of the employment service organisations and ensure that these are made more effective. Such a subcommittee would also consider how abuses related to the existence of private employment exchanges can be brought to an end. In the absence of an effective labour exchange service, the pressure for formal jobs inevitably leads to the emergence of parasitic private employment exchange practices.

With respect to the Kenyanisation of Personnel Bureau, one of the major problems is the lack of co-ordination between it and the national manpower and educational planning authorities. The Bureau can collect and provide information useful to both the manpower planning and education authorities on the nature, size and composition of the supply as well as of the demand for

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1 On the nature and role of the private employment offices, see Technical Paper 28.
manpower with which it is concerned, and this can help in the solution of the growing problem of educated unemployed. Similarly, the Bureau could benefit considerably in its Kenyanisation programme if meaningful manpower budgets were prepared, at regular intervals, by the manpower planning authorities. There is no such co-ordination at present and the Bureau is frustrated in its work, faced on the one hand with a large number of unemployed school leavers with general academic education for whom the prospects of obtaining white-collar jobs are bleak, and on the other hand with a lack of suitably skilled and trained persons for whom there is a ready demand. The Bureau could make a useful contribution towards reducing these growing imbalances in the supply and demand for manpower if it were consulted and given an opportunity to participate in the planning and consideration of manpower, educational and training policies.

This is all the more important in the light of the unavoidable constraints on rapid Kenyanisation in certain fields. As these constraints are already sufficiently well known, we need not go into great detail. We also feel that in any case the Government has been very successful in implementing its policy thus far. Clearly, complete success of Kenyanisation policies will depend in the first instance on the appropriate training of local manpower, and on its availability in the right place at the right moment. Particularly in industries where the number of firms is large, the typical firm small and the competition keen, few individual firms would risk spending much on training unless they knew that their competitors were doing likewise. We therefore endorse recommendations already made in the past that Kenyanisation policies in general, and training policies in particular, should be looked at from an industry-wide point of view and not as they appear to individual firms. Exact national training requirements could be better assessed if closer integration with manpower and educational planning and policies, as referred to above, could be achieved. But the approved training programmes must be specific and their progress must be monitored. The granting of protection, licences, and so forth should be tied in with agreed Kenyanisation programmes.

Turning now to participation, we feel that it is important to note that trade unions and employers' organisations have already been associated with a number of government activities directly or indirectly affecting employment. Representatives of COTU and of the Federation of Kenya Employers sit on several government and private boards and committees and attend tripartite meetings; these include the Labour Advisory Board (where all major labour matters are discussed), the Vocational Training Advisory Board, the Adult Education Board, the Industrial Court, wages councils, the Management Training Advisory Board and the National Social Security Fund Advisory Board.
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But the participation of employers' and workers' representatives in development activities should not be limited to labour relations or work situations. Their contribution could also be extended to other development activities including the elaboration and implementation of national plans. These organisations are in effect in a privileged position for helping the Government to translate the objectives of an employment strategy into realistic policies and for maintaining fairness and equity in the implementation of such policies. They could also be used as a means of spreading information, developing a sense of mutual responsibility and stimulating self-help efforts throughout the country. Labour organisations, in particular, can develop or strengthen links with such groups as small farmers, the informal urban sector and the unemployed to take account of their interests also in the pursuit of employment-related activities.

The tripartite agreements

We shall close this chapter with a short discussion of the tripartite agreements, which are direct attempts to use the industrial relations system for the employment promotion task. These agreements reflected the growing concern of the Government, employers and trade unions with the employment situation. They represented the first attempt ever made in any developing country to use the forces of the industrial relations system in a concerted campaign, and by way of formal agreement, against unemployment.

As mentioned in Chapter 6, both the 1964 and the 1970 Agreement succeeded in generating a certain amount of additional employment, but they also contributed to raising expectations to a greater extent than they realised them. The additional employment generated was almost all short-term. This was indeed the declared policy objective; both agreements were intended to be short-term measures pending a long-term programme. However, in neither case was such a long-term programme actually put into effect. In the 1964 Agreement the Government indicated its intention to introduce a wages policy and to set up the Industrial Court; the Court was established as agreed, but no wages policy was introduced, nor were there any other systematic measures for employment promotion in the long run, other than the general expansion of the economy, which was believed, at that time, to provide the long-run solution to the employment problem. The long-term measures to follow the 1970 Agreement have still to be seen. The Standing Committee on the Tri-

1 Participation has recently been extended to the Price Control Board, where COTU and the Chamber of Commerce are represented.
2 For a more detailed analysis see Technical Paper 26.
partite Agreement released its final report containing a number of suggestions for the promotion of employment, including the introduction of an incomes policy, the promotion of labour-intensive technology, education and training and rural development. The promised incomes policy is still awaited.

The conclusion must be that short-term agreements of this nature involve the risk of dissipating a good deal of co-operative effort on the part of both employers and trade unions if they are not followed up by longer-term complementary measures. They are helpful as the basis for a long-run incomes policy and related measures, but without such a follow-up they use up goodwill without permanent effect. The need is for exactly such a follow-up of the recent Agreement. Our report contains a number of suggestions in this direction (especially in Chapter 16).
The main attack on employment problems by the progressive reduction of poverty, rapid economic expansion and an accelerated increase in income-earning opportunities for poorer people will depend on the totality of measures proposed in the report. The purpose of this chapter is to suggest additional specific measures in the field of incomes and fiscal policy to reinforce the thrust of the over-all strategy. These measures may be divided into two categories—those designed to affect the level and structure of incomes directly, and those which influence them indirectly through government taxation and expenditure.

Direct measures of incomes policy

The main features of the declared policy of the Government, outlined most recently in the Development Plan for 1970-74, are more effective control over wages and salaries in the public sector, including the central Government, local authorities and statutory boards and corporations, in order to reduce earnings differentials between high and low income groups, and over-all restraint in increases of earnings of public servants. In the private sector, the Government proposed to re-structure the Industrial Court and to implement a wage policy along lines it would itself lay down. These lines would indicate an over-all national maximum rate at which earnings per employee, including fringe benefits, would be allowed to rise. Within this over-all ceiling, increases would only be awarded in cases in which they would not have adverse effects on employment and export sales, and whenever possible the lower-paid employees would receive larger increases than the higher-paid ones.

In order to enable the Court to control wage agreements in the entire private sector, all voluntary collective agreements would be subject to approval.
by the Court within a specified time in order to ensure their conformity with
the guidelines. Furthermore, the recommendations of the minimum wages
advisory boards would also be subject to review and approval by the Industrial
Court.

Since the publication of the Development Plan, the legislation empowering
the Industrial Court to implement a national wages policy has been passed.
However, at the time when we prepared our report the Court had not yet been
provided with specific guidelines, and thus the legislation enabling it to make
awards and approve voluntary agreements in accordance with the guidelines
has not been operative. Nor has the Court been strengthened so far by a small
professional staff, as had been indicated in the Plan. Meanwhile, the determi-
nation of wages in both the public and the private sector continues to be made
on the old basis, and wages and salaries have continued to rise rapidly at the
top as well as at the bottom of the scales.

A national wages policy along the lines enunciated in the Development
Plan is in our view an essential element in any strategy to remedy the dis-
tortions in the incentive structure and to achieve a more equitable distrib-
ution of income and a rapid expansion of productive employment oppor-
tunities. The basic problem is that, in spite of many declarations, the main
requirements of a national incomes policy in Kenya have not yet been met,
and seem to have been largely ignored in recent government decisions in this
field.

What are the conditions for making a fresh start in this field? In our view,
there are at least four:

(1) The main elements of an incomes policy must be clearly formulated
—spelt out in practical terms that are understood by the main parties
involved.

(2) The elements of the policy must be comprehensive and seen to be fair,
covering all types of income, allowing the main burden of restraint to fall on
the richer groups in society, and not requiring the poorer groups to make
sacrifices in advance of the richer.

(3) As an element of fairness, as well as to remove distortions in incentives,
the policy must provide not merely for general restraint in the rate of in-
crease of wages and incomes, but for major changes in their structure as time
goes by.

(4) Implementation of the policy must involve the major interest groups
concerned, and ways must be found to give more representation to those like
small farmers and workers in the informal sector who are under-represented
at present.
As regards the first condition, we recommend that the Government should now provide the Industrial Court with very specific criteria for wage rate increases for different categories and levels of incomes. The permitted increases should be determined in the light of trends in employment growth, consumption, investment and the balance of payments, and shortages and surpluses of specific skills (as distinct from formal educational attainments).

The mission has had neither the time nor the resources to outline fully all the guidelines for an incomes policy consistent with its over-all strategy, but at the least the following elements ought to be included to meet the second and third requirements listed above:

(1) The guidelines for maximum wage increases should be specified for different levels of income, allowing in general for more rapid increases among the lower income groups and some tapering of rates as incomes increase.

(2) Assuming that real gross national product increases by 7 per cent, appropriate maximum annual percentage rates of increase in pay for the different wage-earning groups would seem to the mission to be as follows, in real terms: 3 per cent for persons earning less than £200; between nil and 3 per cent for persons earning between £200 and £700; and nil for persons earnings over £700.

Such changes would ensure that wage increases among the lowest income groups in formal-sector employment would be somewhat less than the increases in average incomes expected in the rural areas. Changes in real wages should in all cases be calculated before income tax and by reference to the cost-of-living index of the lowest income groups. Such a course is acceptable from the point of view of incentives and, in addition, would be a small step towards greater equity within income groups, since persons with more than the average number of dependants would pay less tax and generally purchase a higher proportion of low-cost goods and services, and thus be less penalised in terms of real consumption.

As an additional part of the over-all policy for the short term, and in view of the rises in incomes recently awarded, we propose that there should be a freezing in monetary terms of the salary scale of employees earning more than

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1 If gross national product or rural incomes grow at lower rates, the maximum increases in pay scales and rates would have to be reduced.
2 Though individuals in this last income bracket should be able to obtain increases through annual increments and promotion.
3 Although in recent years the cost-of-living indices for persons in the low and intermediate income groups have generally moved at much the same rate, the middle-income index would in the future move somewhat faster than the low-income index if luxury and semi-luxury goods were subject to special purchase taxes.
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£700 per annum for the next five years. This would involve a modest reduction in real salary scales, though more or less maintaining incomes of individuals on rising scales, depending on the rate of inflation.

Within these general guidelines, wages policy should be actively used to eliminate anomalies and help evolve a structure which will reflect changes in the demand for and supply of different levels of skills and different types of labour. The chapter on labour markets identifies several examples of extreme distortions in the wage structure. We also argue the need for sharp reductions in the rewards and incentives to education as an essential element in the re-structuring of the educational system. One main implication for wages policy is the recommendation that wages should not be tied to formal educational attainments. Secondly, wages for clerical and junior administrative staff appear to be unduly high in relation to those of technical personnel and skilled and semi-skilled workers. Thirdly, earnings rise steeply in accordance with levels of formal educational attainment. Such differentials may have been appropriate in the past, when there was a great scarcity of persons with primary and secondary education; but there can be little justification for it at present, and even less in the future, in view of the enormous increase in the output from the educational system and the surplus of school leavers seeking jobs in the formal sector.

The principles outlined above should apply to all earnings of those now in wage employment in the formal sector. In addition, we propose that the Government should give serious consideration to the introduction of a system whereby new recruits into the public services with school certificate and higher qualifications should be paid salaries for a specified period at well below the existing rates. We see two main advantages in this proposal. In the first place, it would reduce the cost of expanding government employment as required to implement many of the proposals made in this report. Secondly, our proposals would facilitate a general adjustment to the changing supply situation in the labour market. There is the growing surplus of secondary-school leavers seeking wage employment in the formal sector. The same situation is emerging at university level for arts graduates. A reduction in public-sector remuneration for the new recruit would make a dramatic but necessary impact on incentives,

1 Chapter 15.
2 Even if there are still scarcities of highly educated manpower, this is not usually a justification for increasing salaries. The existing supply of Kenyans with higher education will not be altered by changes in salaries; and the future supply is largely dependent on the education system, for which the supply of potential students already vastly exceeds the number of places. Although foreigners must in some cases still be paid well above local rates, Kenyanisation is designed to remedy this in the future, and in the meantime the various systems of inducement allowances, gratuity payments, etc., should be used to provide incentives without distorting local salary scales.
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curbing demand for formal education and for government jobs and increasing
the relative attractiveness of other forms of employment, particularly self-
employment and jobs in the private sector.

The level at which the new salaries should be fixed, the length of time for
which the lower rates should be payable, the conditions concerning additional
benefits and the possible extension of this system to the private sector are
matters which we feel should be determined by the Government in the light
of its budget, the need to secure a surplus for development projects, and the
anticipated increase in employment in the public sector. As a starting point
for these discussions, the mission suggests that for the first five years rates of
pay fixed at about 75 per cent of existing rates should be considered.

The success of a national wages policy will depend in large part on the
ability of the Government to maintain reasonable stability in the cost of living
for lower and middle income groups and to prevent excessive profits by business
enterprises. It is therefore essential to devise a price policy as part of an over-
all incomes policy.

Price policy

This is not new in Kenya: already the Government is responsible for fixing
the prices of some essential foodstuffs. However, in the past there has been
a tendency to fix these prices without reference to incomes policy. We discuss
below the scope for increasing rural incomes by fixing the prices of agricultural
products. Here the other aspect should be stressed, namely that reasonable
stability in the prices of essential foodstuffs is a necessary ingredient of an
effective wages policy. Apart from fixing certain agricultural prices, the Govern-
ment has created a Price Control Advisory Committee composed of represen-
tatives of employers, trade unions, consumers and other bodies. Prices may
not be increased without the approval of the Committee. So far the Committee
has recommended approval of most of the requests made. Price control is
intended to be temporary, but it could be extended to form the basis of price
control as part of an over-all incomes policy. For the Committee to perform
this function, however, some changes will be necessary. First, general criteria
need to be laid down, in the light of incomes policy and other objectives,
concerning which price changes might be justified. Secondly, in the long run
it is obviously impossible (and in any case undesirable) to consider and pro-
nounce upon every single price change. All price rises should be registered
with the Committee but only a fraction can be thoroughly investigated. Thus
a random sample or a selected category of requests for price increases should
be investigated and the rest allowed unless at variance with the stated criteria,
in which case they should be disallowed within some interval after they have

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been introduced. Thirdly, there would be some value in making the investigation and decision more public. Apart from ensuring impartiality and fairness, this would help to deter firms from increasing prices.

The most effective method of controlling excessive and monopoly profits is through import policy. Planned reductions in import duties can be used to enforce efficiency in local firms and to regulate the profit levels of firms enjoying a monopolistic position. Competition can be further increased by policies in favour of small enterprises, which are in any case recommended on employment grounds. Decision on the amount and type of protection to be granted to local firms are taken by the Industrial Protection Committee. It is therefore essential that the Price Control Advisory Committee and the Industrial Protection Committee should work closely together.1

The main contribution to increasing the incomes of persons on low incomes in the rural areas must come from the various programmes designed to raise rural production and accelerate rural development. In addition to all this, can the Government take any direct action to raise the incomes of the poorer sections of the rural population?

The three obvious possibilities are to increase rural wages by government regulation, to increase the prices of agricultural products, and to lower the prices of agricultural inputs. Unfortunately, further examination shows that the scope for such action is severely limited. To take rural wages first, any attempt by the Government to enforce a substantial increase in wages by minimum wage legislation on either large or small farms or both will almost certainly have serious adverse effects on the volume of wage employment. This is so because the prices of most agricultural products are determined in the world market and are subject to large seasonal and annual fluctuations. Even for locally consumed products, a policy of pushing prices up will have a number of harmful effects. Thus, a high wage policy implemented by government regulation would reduce employment, encourage mechanisation and other labour-saving action, and further deepen dualism in agriculture because of the difficulties of enforcing such a policy on small holdings and in small non-agricultural enterprises.

A general policy of raising agricultural prices is not a viable alternative, for reasons discussed in Chapter 10.

In any case, since agricultural produce accounts for a higher proportion of the expenditure of poor households, both in urban and in rural areas, they would be the hardest hit by high food prices. This in turn would undermine the whole basis of a national wages policy along the lines outlined above.

1 Detailed proposals on protection policy are made in the chapters on industrial and international policies, and in the fiscal policy section of this chapter.
Incomes and fiscal policy

Much the same arguments apply to price reductions for agricultural inputs. Some possibilities in this respect, specially designed to shift incomes to the poorer farmers, have been indicated in Chapter 10, but this is only one of the elements of an over-all incomes policy.

Fiscal policy and redistribution of income

The implementation of the main elements of the strategy proposed by the mission, taken together with the recommendations on incomes policy, should go a long way, in time, towards improving income-earning opportunities for the members of society who are relatively worse off, and towards creating a more egalitarian structure of income distribution. But these policies can and should be further reinforced by changes in the fiscal mechanisms for the redistribution of income and welfare to the poorer sections of Kenyan society. We shall discuss first the formal instruments for income redistribution and subsequently touch on the informal mechanisms.

On the formal side, the main instruments available are government taxation and expenditure. The real disposable income of a family is affected by the amount of money taken away through taxation and by changes in the prices of goods and services on which the income is spent. At the same time, the income available to a family may be augmented by subsidies, gifts and transfers, and by public social and economic expenditure benefiting the family members. In this respect, the fiscal mechanism can in principle be a most powerful instrument for redistributing incomes and welfare. In 1969-70, for example, the revenues raised through taxation by the central Government and local authorities combined amounted to a total of £86 million. Total public-sector expenditure, by the central Government, East African Community operations in Kenya and the local authorities, amounted to £150 million. Even when allowance is made for the necessary expenditure on administration, defence, law and order and the discharge of financial obligations, there remains a large sum of money which can bring about major changes in the welfare patterns of different income groups. Apart from its role in redistributing income, fiscal policy is of crucial importance in mobilising resources for development and in influencing the pattern of resource allocation in the direction of employment creation.

Judged in the light of these objectives, two features of the tax system in Kenya stand out: first, it does not have any significant redistributive effect, and secondly, its revenue-raising potential does not seem capable of keeping up with the need for additional financial resources. With respect to the fairness of the tax system, the combined incidence of direct and indirect taxes, constituting in all about 80 per cent of the central government tax revenue, was
Employment, incomes and equality

analysed in a recent study¹ by the Institute for Development Studies as follows:

<table>
<thead>
<tr>
<th>Persons with a monthly income in shillings between—</th>
<th>Tax incidence as a percentage of income</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 and 199</td>
<td>11.5</td>
</tr>
<tr>
<td>200 and 299</td>
<td>11.3</td>
</tr>
<tr>
<td>300 and 399</td>
<td>8.5</td>
</tr>
<tr>
<td>400 and 499</td>
<td>8.3</td>
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<tr>
<td>500 and 699</td>
<td>8.8</td>
</tr>
<tr>
<td>700 and 999</td>
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<tr>
<td>1 000 and 1 399</td>
<td>9.3</td>
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<tr>
<td>1 400 and 1 999</td>
<td>9.6</td>
</tr>
<tr>
<td>2 000 and over</td>
<td>12.7</td>
</tr>
</tbody>
</table>

It will be seen that over-all, the tax system has practically no progressive impact. The study also showed that well over half of the employees potentially liable were not in fact assessed for income tax, while just under half of the liability to graduated personal tax is evaded. Although no estimates were made for the self-employed, opportunities of tax evasion and false declaration of income are even greater for them than for employees.

In the future, the revenue-raising potential of the tax system is likely to decline for a number of reasons connected with structural changes in the economy. The continuing subdivision of large farms, and Kenyanisation policies in the field of commerce and industry, are likely to make tax assessment and collection more difficult. Likewise the process of import substitution deprives the Government of revenue from import duties, and the loss is not fully made up by corporate and personal taxation of the new enterprises. At the same time, the development and recurrent expenditure of the Government has been rising rapidly, and the rise can be expected to continue. The strengthened capacity of government departments to initiate and implement development projects has resulted in a striking increase in spending in relation to development appropriations. There is therefore a need for a major overhaul of the tax system to improve its equity and to enhance its revenue-raising and employment-creating potential.

It would be desirable to bring a larger number of persons within the income tax net, but the existing tax assessment and collection machinery may not be able to cope with the increased workload. We have already mentioned the evidence of widespread tax evasion by employees and the self-employed. We feel, therefore, that efforts should at first be directed primarily towards im-

proved tax assessment and collection at existing rates. This could raise a considerable amount of additional revenue. The present structure of income tax has the effect of taxing persons within the income range of £600 to £1,200 per annum relatively lightly. We recommend changes in rates and allowances to increase the incidence of income tax on persons falling within this income range. The individual income tax is characterised by relatively high allowances of various sorts which could well be reduced and simplified.

In contrast to income tax, the revenue raised from graduated personal tax is small in relation to the effort put into it by the local authorities. Moreover, barely a quarter of all of this tax is raised outside the main urban areas.\(^1\) It is therefore proposed that consideration should be given to the abolition of the graduated personal tax in all rural areas. Apart from providing direct relief to low-income groups, this measure will free the time of the officers of the local authorities in the rural areas for planning development projects.\(^2\)

Proposals with respect to company taxation have been made in an earlier chapter of this report in so far as they affect foreign companies.\(^3\) If the Government is acutely short of funds, consideration should be given to a modest increase in the corporate tax rate. In addition, consideration might be given to the abolition of the investment allowance of 20 per cent, which subsidises the use of capital. In any case capital is imported below world prices because of the overvaluation of domestic currency at the official exchange rate and the duty-free treatment of most capital goods.

The mission has also given consideration to the introduction of a land tax, and of increases in the urban property tax. With the rapid growth of the economy and the rapid rise in population and urbanisation over the past eight years, land prices and property rents in both rural and urban areas have risen sharply, providing a windfall gain to the richer sections of the society. Apart from taxing some of these gains, the introduction of a progressive land tax in the rural areas would result in more intensive utilisation of land and in the subdivision of poorly managed large farms, thus contributing to increased employment, the raising of rural incomes and improved income distribution.\(^4\) It would have few negative effects, if any, on incentives. The revenue obtained from the land tax could compensate for the loss of revenue from the graduated personal tax, and could also replace a variety of other minor agricultural taxes such as cesses. We recognise that the introduction of a land tax will raise considerable administrative and political problems, apart from technical

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\(^2\) See Chapter 19.

\(^3\) Chapter 11.

\(^4\) See Chapter 10 and Technical Paper 15.
questions of the rate at which it should be levied in different areas, the minimum
size of exemption and so on. But we commend land tax and increased urban
property taxes for further study and consideration of the Government as
long-term measures to raise revenue, increase employment and improve
income distribution.

In the short run, the major scope for tax reform lies in a re-structuring of
indirect taxation. The purpose of the suggested changes is to enhance the
revenue potential and the progressivity of the tax system, and eliminate the
present distortion in resource allocation and the bias against exports. The
first proposal is for a unification of the external tariff rates, and their extension
to capital goods and intermediate goods. The unifying of the tariff structure
would increase the level of revenue and eliminate distortions in resource allo-
cation caused by the haphazard evolution of the existing tariff structure. In
addition, the extension of the tariffs to capital and intermediate goods would
remove the subsidy to capital, with possibly favourable effects on labour
absorption, while stimulating the growth of an indigenous capital goods
industry. Furthermore, taxes on intermediate goods would close a loop-hole
for tax evasion and outflow of funds from the country. To offset the disadvan-
tages to exports, the proposed tariff reform should be accompanied by a selec-
tive subsidy for exports of non-traditional products. Should this recommen-
dation prove difficult to implement, consideration might be given to the
introduction of a dual exchange rate favouring exports, with the exception
of coffee.

The unified tariff structure would have the effect of reducing the price of
many commodities consumed primarily by individuals with high incomes.
To counteract the effect of this on the demand for importable goods, there
should be a progressive sales tax on luxury and semi-luxury goods, both
imported and domestically produced. A large number of goods could be
brought within the scope of such a sales tax, including consumer durables,
spirits, cosmetics and canned and processed foodstuffs. This would provide
the Government with an important source of revenue. At the same time it
would improve the attractiveness of the export market, where sales would
be exempt from this tax. A particular virtue of a progressive sales tax is that
it is administratively simple and that there is less possibility of evasion than
with an income tax.

In addition to sales taxes on consumer goods, consideration might be
given to a selective sales tax on certain categories of capital goods which have
a particularly labour-displacing effect. Large tractors and combine harvesters,

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1 See Chapter 9, on technology.
2 See Chapter 11.
automatic loading devices on trucks and certain types of construction equipment might be candidates for this type of tax.

The mission considered the introduction of an employment subsidy. We felt, however, that our other proposals—the abolition of the investment allowance and the extension of a uniform rate of tariff to capital and intermediate goods—would be adequate to remove the current bias in favour of capital. Our proposals on wages policy should also moderate the increase in wages. The introduction of an employment subsidy would add to the administrative burden of tax assessment, open up a new loophole for tax evasion, and result in loss of tax revenue at a time when the need is to increase it. In view of these considerations, we do not propose any subsidy on employment.

Government expenditure, like taxation, has a dual role: it can serve both to redistribute income and to stimulate growth. It has not been possible for the mission to quantify the redistributive impact of government expenditure. On the basis of the limited evidence available, it does not seem to us that at present public expenditure does much to redistribute income in favour of the poorer members of society. The lion's share of public expenditure continues to go to urban areas. With some significant exceptions, the really backward parts of the country receive a very low share of government expenditure on social and economic services such as education, health, roads, and extension and training. Furthermore, it appears that in both rural and urban areas the better off tend to derive more benefit from public services: for example, progressive farmers are the main beneficiaries of extension services, loans, subsidies on inputs, and so forth; high-income employees have superior medical services, and access to better education and so on. On the other hand, the poor urban areas, which contain most of the urban poor and where the informal sector is centred, have services of a low standard.

We believe that a major re-structuring of government expenditure to benefit low-income groups in both rural and urban areas is vital if more resources are to be effectively channelled towards the low-income groups suffering from lack of earning power. The various programmes proposed by the mission in industry, agriculture, services, education, health and population should result in a considerable increase in the absolute and relative incomes of the poorer groups. In addition, it is recommended that a committee, possibly a parliamentary committee, should undertake a review of all government revenue and expenditure with a view to enhancing its redistributive effect. We would

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1 It is noteworthy, for instance, that school fees are in effect abolished in 11 of the more backward districts. Other differential measures of this sort are required, if the historical factors associated with present differences between regions and districts and the rural and urban areas are to be overcome.
Employment, incomes and equality

propose that the Government establish targets for expenditure per head by regions (with the main urban areas separately identified), on services such as education, health and roads. The objective should be to reduce and over a period of time to eliminate the disparities in the level of such expenditure per head in different parts of the country.

Informal mechanisms of income redistribution

The discussion thus far has focused on the formal instruments of income redistribution. It is, however, clear that in Kenya a variety of informal mechanisms play a highly important role in redistributing income from rich to poor members of society. The most important of these mechanisms are the extended family system and voluntary, co-operative Harambee projects. The former results in a redistribution of income from the better-off to the poorer members of the extended family through joint living, payment of school fees, loans and direct cash transfers. Cash transfers are particularly important: as noted earlier, about £20 million may be transferred each year from the earnings of employees in the formal sector to the rural areas. A substantial proportion of these transfers are to members of the nuclear family living in the rural areas, but others also benefit.

Contributions to Harambee projects, whether concerned with social welfare or development, also result in income redistribution through differential contributions by persons of different income levels. There are undoubtedly many other informal mechanisms ranging from welfare groups to quasi-commercial enterprises, for the most part based on ethnic and communal loyalties, which together result in a very considerable redistribution of income in favour of the poorer members of the extended family, clan or tribe.

However, as development and urbanisation gather momentum, the traditional mechanisms for income redistribution tend to weaken. Full discussion of the impact of modernisation on the informal means of income redistribution requires a deep understanding of the social systems of different groups of people; for practices in this regard vary a good deal from one group to another. Particularly important here are the different customs with respect to inheritance of land and other forms of wealth. It is our belief that until such time as the State is in a position to develop a full range of policies to assist the poorer

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1 The Harambee movement combines income redistribution with a number of other features having a direct effect on employment policy, by offsetting the centralising effects of planning from above, mobilising underutilised labour and local savings capacity, improving rural welfare, widening participation and counteracting frustration. However, as pointed out in Chapter 14, there may also be unequalling inter-district effects involved, in so far as the richer districts can manage to collect larger over-all contributions than poorer districts.
members of society, including the provision of unemployment benefits and old-age pensions, the traditional modes of income sharing and redistribution have a major contribution to make to social welfare. Every effort should be made, therefore, to preserve and strengthen these elements of the local traditions. Sociologists and other social scientists of the University of Nairobi should be encouraged to undertake studies in this field, with particular emphasis on how traditional mechanisms of distribution which benefit the poorest sections of the population have operated, what hinders them and what changes in government policy would stimulate their more effective operation in the future.
A change in strategy along the lines indicated in the previous chapters would need understanding and support from Kenya's trading partners and from aid agencies. It would also require radical changes in Kenya's own external policies. In Chapter 6 we examined the sudden emergence of a serious payments deficit in 1971 and the consequent loss of reserves. We mentioned the tightening of credit, the raising of taxes and the checks to government expenditure with which the Government has attempted to staunch the outflow of essential foreign exchange. Drastic measures may well have been necessary. Those taken have succeeded in stabilising reserves, at least temporarily. They are first aid, however, rather than the first steps in re-structuring development strategy so as to achieve simultaneously a healthy balance of payments and economic expansion of a type and speed that would ease the problems of poverty and unemployment. Some of the measures are in fact completely inconsistent with such a strategy, which requires rising government expenditure in key fields and increasing credits. Moreover, the emergency ban on certain types of imports could increase the profitability and security of inefficient firms, and create incentives conflicting with the employment strategy proposed here.

The urgency with which the Government views the situation is revealed by a comparison between the current estimate of the total payments deficit for 1970-74 and what was shown in the Development Plan, published in mid-1969. It was then expected to be less than £200 million at current prices. Early in 1972, this estimate was raised to nearly £300 million.\(^1\) The increased gap is to be filled by a corresponding rise in the inflow of capital. This means relying even more heavily on one of the central strands of the strategy of the 1960s,

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\(^1\) See Government of Kenya; *Plan performance and expectation, 1969-74*, Part 1 (Apr. 1972). The new estimate apparently assumes that imports will rise at least as fast as domestic product and that the terms of trade will continue to turn against Kenya.
and calls sharply in question the feasibility of maintaining the present strategy. We shall look in turn at the two main forms of capital inflow—private investment and aid—asking not only whether the funds are likely to be obtained but also how the Kenya Government might devise long-term policies so as to fit each of the two main forms into the kind of strategy we are advocating.

Foreign private investment

The official projections show private foreign investment in 1970–74 as totalling £140 million. Since the inflow of private capital in 1969 was only £13 million, the new projection implies a big increase; in fact, investment from this source would need to be of the order of £50 million in 1974 alone. The gross inflows would have to be still larger than this because of the rising outflows of the capital of emigrants.

It is doubtful whether such a sharp acceleration in private capital inflows would be possible in any circumstances. It would be especially unlikely if steps were taken to ensure that it did not create more of the protected, high-profit, capital-intensive industries that bear some responsibility for the present complex of connected exchange and employment problems.

There are many familiar benefits in foreign investment. It brings badly needed managerial and technical expertise and transmits part of this to local personnel; sometimes it provides access to foreign markets. But these advantages are purchased dearly if the cost is to worsen the balance of payments and aggravate social problems. Private investment sets up an outflow of foreign exchange, and within a few years the result is often a foreign exchange loss—if one takes account not only of big profit remittances made possible by protection but also of such items as payments for intermediate products or contributions to head office expenses. Import-substituting industrialisation, one of whose aims is to help with the balance of payments, may, in these circumstances, have quite the opposite effect. Investments that lead to increased exports are much more defensible, but many foreign firms have branches in other parts of the world, so whether and how much they export from Kenya will depend on world-wide company policy. The net flow of foreign exchange will have to be justified by the contribution of the investment to the Kenyan economy in the light of the employment strategy or any other development strategy accepted by the Government. Artificial profits arising from distorted

1 Net of outflows but not of amortisation charges or of reinvestment of profits of foreign companies.

2 The outflow will almost certainly grow even if emigration does not, because emigrants are allowed to take only part of their capital with them when they leave, the remainder being remitted in annual instalments.

3 See the chapters on industry and technology.
International policies

The Government's paper for the Paris meeting of the Consultative Group for East Africa in April 1972 put total aid requirements for 1970-74 at £200 million, including what is needed to cover amortisation on past debt. Since gross aid has been running at about £20 million a year, this implies a very steep rise indeed, from £36 million in 1972 to over £60 million in 1974. These estimates would be still greater but for the assumed sharp rise in foreign private investment. Kenya has benefited from a relatively large volume of aid in the past by international standards, though this has shown no upward trend since the mid-1960s.

Financial aid and technical assistance

Local action needed to improve negotiations with foreign firms has been discussed in the chapter on industry. It could be supported by international agencies. Their help in research would be particularly valuable, not only for developing more appropriate technologies but also for discovering the cost of the transfer of technology through foreign companies and developing expertise in screening foreign investments. This field has been, until very recently, almost completely ignored. Another form of help, linked to such research, would be competent and objective technical advice to Kenya (and other governments similarly placed) on policy towards such companies, especially on the terms and conditions under which new investments should be licensed.

Toughening requirements in this way may well discourage some potential investors. This is the point of screening. Those whose investment would involve net benefits to the Kenyan economy, however, will not object to being asked what those benefits are, and there is scope for encouraging such desirable investors by an improved structure of incentives. They are more likely to be concerned that the ground rules shall not be altered after they have committed their money. Still, eliminating the others will make it more difficult to achieve any fast increase in foreign private investment, such as the Plan envisages. The ideas contained in the technical papers on the control of profits and on foreign investment should help to ensure a positive contribution from foreign investments.

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mid-1960s. We need to look, however, both in evaluating past donor performance and in assessing the future role of aid, at its quality as well as its quantity.

The sort of programme put forward in this report places a heavy emphasis on agriculture and education, sectors in which the need is not so much for large identifiable projects as for programmes linking together several small projects and covering the recurrent expenditures that are implied. Moreover, the employment strategy we put forward implies that projects should be so designed as to use as little imported equipment as possible.

Aid now covers 40 per cent of the development budget, and if no donors were prepared to pay local costs this could impart a serious bias to the development programme; the Government would be compelled to choose projects such that their foreign exchange costs accounted for almost half the total. Fortunately, however, this is not the case. Donors will generally help with local construction costs, at least to some degree, so the problem can be eased by putting up to the more restrictive donors projects with low local costs, for example projects in sectors such as electric power and communications. Moreover, there are sources such as the World Food Programme that are designed to help specifically with labour needs in rural public works.

Kenya should not have to concern itself so much with the whims of individual donors. Those who refuse to cover local costs may well also impose undesirable conditions. And if, for one reason or another, they do not want to take up the capital-intensive and import-intensive projects proposed to them (for example because of shortage of capacity in their own industries making goods such as electrical generators), then the Government’s investment programme could still be seriously biased.

The very existence of the restrictions on the covering of local and especially recurrent costs imposed by the donors discourages government departments in a subtle but pervasive way from preparing labour-intensive projects. Since aid in meeting recurrent costs has virtually ended, there is now an even stronger bias against projects that generate needs for significant recurrent expenditures—which is true of nearly all defensible education and health programmes.

The matter takes on a new dimension now that there are difficulties connected with foreign exchange. If the Government did not have to bother about the balance of payments, it could safely cover local and recurrent costs by borrowing as much as it needed from the Central Bank. If henceforward the

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1 These are preferred by donors because they achieve publicity and also permit closer supervision. Both these criteria also favour projects in the capital. A classic example of a large identifiable project was the teaching hospital in Nairobi; donors might have been less enthusiastic for a (more urgently needed) programme of setting up rural health posts.
International policies

planners have to treat the balance of payments as a continuing source of difficulties, this possibility is no longer of much practical use.

There is a limit to the amount of aid that Kenya can use if aid is tied to the cost of projects in foreign exchange—and thus to total spending on development. An increase in aid as large as is envisaged in the document cited could be effectively used only if it were available in much more flexible forms. Even within the limit there are other arguments in favour of selectivity, set out in Technical Paper 29.

There are naturally still greater objections to tied aid whose use is restricted not merely to foreign exchange costs but to procurement from the donor’s own capital-goods industries. Tying the disbursement of aid loans would be less damaging (and less unfair) if donors agreed to accept repayment in Kenyan manufactures. Indeed long-term contracts linked to amortisation payments could be extremely helpful to the development of Kenyan industry.

A familiar effect of tying is to reduce the value of the aid and increase the cost of aided projects. A less familiar effect which arises out of the employment problem is that tying limits the choice of equipment very drastically, whereas a central theme of this report is that the choice of technology needs to be greatly broadened.

Another common defect in aid is that commitments are normally made for only a few years ahead, reflecting to some degree financial legislation in donor countries and also to some degree a belief once current that there was a comparatively short period of take-off, after which a country would enjoy self-sustaining growth. It is now increasingly realised that the correct metaphor is more that of a long and difficult haul.

This becomes all the clearer, the more weight one gives to the elimination of poverty and to other social objectives. There is another aspect. From Kenya’s point of view, the need for the frequent negotiation of aid gives donors an added influence on policy, an influence that may run counter to the new policies unless they are fully supported by the donors. The question is whether they will now review aid policies to assess not merely the beneficial effect of aid on growth but also the possibility of changing these policies to help in the solution of Kenya’s social and employment problems. Once they fully accept the importance of Kenya’s problems of unemployment and poverty, they will find that they could help in many ways besides agreeing to finance sector programmes as well as individual projects, untying aid as much as possible and entering into long-term commitments. More aid could be channelled through national intermediaries such as the Industrial and Commercial Development Corporation, the Agricultural Finance Corporation or the National Construction Company—strengthening national institutions and at the same time making it possible to subdivide aid for smaller projects and
Employment, incomes and equality

enterprises. Donor governments could press investors to use labour-intensive technology and to subcontract locally as much as possible. Our analysis of the past performance of donors and Kenyan policy towards them indicates that they have a considerable influence on new ideas and programmes and that there has been a considerable adaptation by Kenya to their preferences. Hence we attribute great importance to—

(a) acceptance by the donors of the strategy adopted by Kenya and the new priorities that it will involve; and

(b) a policy of selectivity by the Kenyan Government to shape and adapt to these new priorities the aid it accepts.

Unless the exchange deficit is quickly and permanently eliminated, Kenya can benefit greatly from some kind of aid in the balance of payments to meet the rising needs of materials and spare parts that an expanding economy requires. Imaginative reactions are needed as problems arise.

For Kenya, the attempt to change the direction of development strategy requires a strengthening of her machinery for putting forward aid programmes. Additional personnel will be needed for the time-consuming processes of preparing projects, of negotiation and of administration, especially since it will be necessary to study sector programmes (including recurrent costs) carefully and assess the employment and distribution effects and the foreign exchange costs of different departmental proposals—whether or not they need aid. A careful inspection of “gift horses” may be necessary at times—especially of any project pushed by a donor involving the purchase of equipment in the donor’s own country.

This does not by any means imply a rejection of aid. Indeed the implementation of our proposals would be helped by greater flows of assistance from the outside world. Even tied aid is often better than no aid, though the point after all is not to obtain as much aid as possible but to obtain the quantity and types needed for healthy, balanced development.

Ultimately Kenya needs to reduce its dependence on large capital inflows, which means solving the potentially chronic payments problem by expanding its trade. To increase foreign exchange supplies by borrowing £1 million (or accepting foreign private investment of the same amount) sets up a steady outflow of factor payments and capital repayments over many years ahead; earning £1 million by expanding exports (or saving it by producing substitutes for imports) creates no such obligations, nor are there then any limitations on where the money can be spent or on what types of goods can be bought. This makes it imperative to ensure that the inflows initiating such streams of debt

1 See Technical Paper 29.
benefit the economy to an extent exceeding their cost, the calculation being based on their total effect and the criteria of evaluation being consistent with the employment strategy.

The shortage of skilled manpower is such, however, that Kenya will have for some while to rely on support from abroad, much of it under technical assistance. In September 1971 there were nearly 3,000 technical assistance personnel in Kenya, of whom half were working in education, 18 per cent in agriculture and 10 per cent in health. There are expatriates working at the frontier of development at all levels, from volunteers in the villages to advisers in ministries, doing extremely valuable work, helping directly or indirectly to raise incomes and create employment. There are also others who are too firmly wedded to the idea of transferring to Kenya the practices of their own country—whether these are ways of designing buildings, curing patients, improving the yield of crops, teaching history, formulating economic plans or administering offices. Thus architects, medical specialists, agronomists, teachers, economists or administrators who insist on their own standards, specifications and technology are likely in various ways to obstruct development, in the sense in which the term is used here. The damage done by even one such person can be enormous. For the same reasons, the wrong sorts of training overseas can make Kenyans less, not more, capable of dealing with their country's problems, whatever the diplomas or degrees they have to show for it.

These considerations all point to conclusions analogous to those reached for financial aid—the need for greater selectivity to make certain that technical assistance staff are really able to contribute to the desired changes in Kenyan policy. More detailed suggestions will be found in Technical Paper 29.

Industrialisation and the foreign balance

Industrial exports are of great importance, both as part of an industrialisation strategy and as earners of foreign exchange. These functions are made more difficult, however, by the Kenyan system of protection, which was set up originally to encourage industrialisation but has had the perverse effect of actually making it harder for new industries to manufacture products that are not protected—especially intermediate products and capital goods. High prices have to be paid for protected imports and inputs, while finance and

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1 See Chapter 11.
2 It is true that there is a duty rebate system under which exporters can claim a refund of duties incorporated in export products, but firms can claim this only in respect of goods they import themselves, and even then they have to obtain from the East African Community the status of "concessionaire" and put much work into calculations and negotiations on the (footnote continued overleaf)
skilled labour are difficult to muster, being attracted into the highly protected industries. Industries trying to develop exports in competitive world markets not only face these difficulties, but also find that the exchange rate is overvalued, because protection relieves the pressure on the Government to adjust it.\(^1\)

Moreover, distorted protection has serious social effects. Heavily protected industries can make high profits; they can then pay high wages, and these spread to other industries. Protection is in fact one of the major sources of the urban-rural contrast that we have referred to earlier.\(^2\) It also makes possible—though the evidence is inconclusive on the extent to which this has actually occurred—a high degree of capital intensity, which, indeed, is also encouraged by the relatively high level of wages. The measures taken recently to reduce imports \(^3\) may well have incidentally increased such distortions. Though not as severe as those in some other developing countries, these now add up to a major hindrance to an export drive.

What has been fundamentally wrong with import substitution in Kenya has not been its objectives, or the fact that tariffs and subsidies of various sorts have been used to promote it, or even the fact that these have often been discriminatory. What has been wrong is the way in which the entire structure of tariffs and quotas was put together, not as part of a coherent strategy, but piece by piece in response to pressures and temptations of various kinds. The end product is a system from which the industries most viable on the world market, broadly the most labour-intensive, suffer most.

One step towards a more rational industrial structure, a structure creating employment and opening up export possibilities, would be to move to a more equal tariff. This would mean lowering many tariffs but also imposing duties on capital goods, intermediate products and other goods currently allowed in duty free. It would also mean placing excise taxes on non-essentials, so as to discourage their local production and their importation, though not necessarily their manufacture for export markets. Some businesses would have difficult

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\(^2\) Especially in Chapter 5.

\(^3\) Described in Chapter 6.
International policies

adjustments to make, and for this and other reasons the unification of the tariff structure would take time.

East African countries have provided the main export market for Kenyan manufactures in the past, and this market has grown considerably since the treaty for East African co-operation came into effect in 1967. However, this has brought about growing imbalances in the accounts of Tanzania and Uganda, which countries have resorted to transfer taxes and other devices to reduce this imbalance; and they are themselves developing the production of textiles and other goods they used to buy from Kenya. If Kenya is to develop this market in the future, a growing concentration (as has already started to happen) on more sophisticated and more essential products will be needed—particularly on capital goods and intermediate products, where Kenyan producers (being much less heavily protected, perhaps even penalised from some points of view) could charge prices much closer to those prevalent in the world market.

It is also, however, obviously desirable for Kenya to try to re-create the common market as envisaged in the treaty (which was intended to "reduce existing industrial imbalances"). For this purpose a payments mechanism would be useful, thus making it possible to restore genuine free trade within the region. A payments union and a co-ordinated industrialisation plan would also be helpful (another possible constructive use of aid funds), giving better prospects to Tanzania and Uganda, and thus assuaging their apprehensions.

The other big market (essentially a potential one so far) is provided by the industrial countries. Up to the present, exports of manufactures to European countries, despite duty-free access to Britain, have been negligible. There are large and expanding markets for such products (as has been shown by the success of some developing countries). The Arusha Agreement (to be discussed in the next section of this chapter) opens up new possibilities, because there are no duties now on the exports to European Economic Community (EEC) countries either. With the right kind of incentives, export production from

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2 There is certainly some suspicion that the purchasing officers of governments and state trading corporations are tending to favour local products irrespective of price, or are buying imports which are cheaper c.i.f., thus eliminating the tariff advantages of partners.
3 See Dharam Ghai: "The East African Community: The way ahead", in African Development, Apr. 1972. Professor Ghai, who is the Director of the Institute for Development Studies in Nairobi, also raises the possibility that the idea of joint state ownership, already operating in transport and research, might be extended to manufacturing.
4 Part of the advantage has, however, been eroded by the EEC offer of concessions to all "developing" countries under the General System of Preferences, involving preferential tariffs for all goods listed under the Brussels Trade Nomenclature (Chapters 25 to 99), with partial exceptions for textiles, footwear and fibre products.
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existing surplus capacity could be encouraged. The main immediate prospects relate to the industries processing and canning agricultural products.

Kenya would be helped if industrial countries were to put resources into enlarging the markets of Kenyan manufactured exports. For example, they could help with export promotion, including marketing contacts. However, the scale of unemployment in the industrial countries themselves, though much smaller than that in Kenya, will probably inhibit such productive forms of assistance for the present.

If one takes account too of areas east of Suez where Kenya has a freight advantage over European producers (for instance the Persian Gulf area), especially so long as the Suez Canal is closed, there is definitely scope for expanding manufactured exports, even in the 1970s.

Export-led industrialisation needs an employment strategy to maximise its benefits to the economy. Exports based on home-produced raw materials have a great advantage over those based on imported inputs, and fortunately Kenya’s export drive would be mainly based on the former category. The foreign exchange cost is much smaller and the impact on employment and incomes, and thus on poverty, much greater.

Agricultural exports

Kenya’s two leading exports (coffee and tea, accounting between them for about half the country’s export earnings) have had chronically weak world markets for nearly two decades, and they are subject to sharp price fluctuations, basically because neither demand nor supply adjust very readily to price changes. The long-term growth in world consumption is low for each, lower than the growth of world supply could easily be.

The problems that these commodities pose for employment strategies in the developing countries have been examined at length in the reports of the two previous pilot country missions under the World Employment Programme, to Colombia and Ceylon, which depend heavily on coffee and tea exports respectively. In both cases, international agreements were deemed essential elements in employment strategies, primarily because of the danger that export prices could decline drastically without them.

While these agreements protect prices, they do so by imposing quotas which limit the expansion of export volumes. It could be argued that it would be in Kenya’s interest, as a small producer, to ignore such agreements because she could expand her own output rapidly without much effect on world prices. Since both crops are labour-intensive, the temptation to do this appears strong.

1 As discussed in Chapter 11.
2 See Towards full employment, op. cit., the report of the Colombia mission; and Matching employment opportunities and expectations, op. cit., the report of the Ceylon mission.
We believe it should be rejected, however. We stress the responsibilities of other countries (aid donors, for example) in this report, and we could not consistently argue that Kenya should try to steal a march on other developing countries, many of which are struggling with employment problems at least as great as those of Kenya. Moreover, Kenya would certainly suffer too if her example encouraged other producers to act in the same way, and there were no limits at all on exports. In fact, agreements of this kind shift money from consumers to producers. What Kenya is entitled to argue is that all producing countries should share in the benefit, that is, obtain more for their exports than they would if there were no agreement. This implies that small and more recent producers such as Kenya ¹ would be accorded quotas rising more rapidly than those of the big producers ², and that quotas should not be based on historical market shares. Only on this basis can Kenya be expected to participate in commodity agreements.

Kenya is in fact observing her obligations under the International Coffee Agreement. The Development Plan envisaged an expansion from 48,000 tons in 1968 to 64,000 in 1974, considerably above the quota (at present 51,000), but Kenya is proposing a quota revision and is attempting to develop sales to markets not covered by the Agreement. Some progress has been made with the latter objective (at a price discount) but recent heavy crops have already compelled some coffee to be carried in inventories. The International Coffee Council ³ recommended production policies consistent with quotas rising by 2.5 per cent a year. Even if a special quota is obtained, the possibilities of expansion are clearly limited, and diversification out of coffee is already being encouraged. (There is an international Coffee Diversification Fund linked to the Agreement.)

Tea faces rather similar problems. Here, however, attempts to reach a long-term international agreement have not yet succeeded, and annual quotas are negotiated informally. Production in Kenya, especially that of smallholders, increased rapidly in the 1960s, and the expansion is scheduled to continue in the current decade, with areas under tea on small holdings more than doubling. ⁴ The long-term prospects are perhaps not too unfavourable,

¹ Only 3 per cent of suitable land is planted with coffee; Africans were not allowed to plant coffee before 1937 and were not provided with facilities for doing so until 1954. See OECD: Second Working Conference on Employment Problems in Developing Countries, 1969, and L. H. Brown: A national crop policy for Kenya (Nairobi, 1963).

² The theory of international agreements of this type (applied to East African tea exports) is comprehensively studied in Dan M. Etherington: An international trade policy for East Africa (East African Economics Society Conference, 1971).

³ Resolution 206.

⁴ See Chapter 10. This will involve a considerable increase in Kenya's share of the world tea market, perhaps from 6 per cent now to 12 per cent in 10 years' time.
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although much will depend on what happens to the exportable surplus of India. At present India herself consumes half her own production, and in recent years this fraction has been rising.\(^1\) Kenya's tea now enjoys some consumer preference. With present plans for the expansion of production under favourable cost conditions, to accept formal quota arrangements based on historical market shares would clearly not be in her interest. Quotas once formalised tend to become solidified. In the forthcoming negotiations for the proposed international tea agreement, Kenya's possibilities of expanding production should be taken fully into account.\(^2\)

Sisal, once Kenya's second most important crop, now accounts for less than 3 per cent of exports. In 1963, the ratio was 17 per cent, but export prices fell—sisal has been one of the commodities hardest hit by synthetic substitutes. Informal agreements among exporters initiated in 1967 (and carried on under the auspices of the FAO Study Group on Hard Fibres) have not been very successful in maintaining prices, and have tended to be short-lived. Despite a temporary price rise, long-term market prospects do not seem favourable; they may even be impaired by the encouragement the current price gives to synthetics. The Development Plan anticipates further declines in production, although there are reports of a reversal of this trend in some districts.

There could, however, be substantial increases of exports of other products, especially meat, maize, pyrethrum\(^3\), and horticultural products.

The Association Agreement with the European Economic Community which came into effect in January 1971 (commonly known as the Arusha Agreement) does not greatly affect the prospects for the main traditional exports. Coffee sales are in any case limited by international agreement (though the removal of various taxes in the importing countries may lead to slightly higher export prices), and tea and sisal were admitted duty-free anyway before the Agreement took effect.

On several minor exports, including pyrethrum (flowers and extract), tariffs are removed or reduced, creating potential markets. And while the duty-free quota for pineapples is still very low, the EEC delegates did agree to a small adjustment at the meeting of the Association Council in February 1972, which implies possible further increases in the future. The EEC has also agreed to preferential treatment for meat, dairy products, maize, fruit and vegetables.

\(^1\) From 1955–57 to 1965–67 India's domestic consumption increased at 5.7 per cent per annum, while production grew at only 2 per cent per annum. The FAO's \textit{Indicative world plan} for agriculture envisages a substantial fall in India's exportable surplus by 1985.

\(^2\) This is an important field in which co-operation and a joint strategy among the East African countries will be called for.

\(^3\) As this is a substitute for household insecticides such as DDT, the market depends very much on legislative action in the United States and elsewhere on the use of such insecticides.
imports of which into the EEC countries have been restricted in order to maintain farm prices there, but this is still very short of free entry, and for these products the EEC could cancel concessions so as to safeguard European producers.

The entry of Denmark, Ireland and the United Kingdom to the EEC will not make any immediate difference, since the status quo will be maintained until 1975; but a great deal will depend on negotiations in the meantime, which will cover access to United Kingdom markets as well as the renewal of the Arusha and Yaoundé agreements.\(^1\) New members are expected to adhere eventually to common import systems. Since the United Kingdom, Kenya’s chief customer, admits freely all important agricultural products from Kenya (raw and processed), it would be a severe blow if she simply adopted the EEC import régime, even in its somewhat modified form under the Arusha Agreement. It is in any case certain that Kenya, like other East African countries, will lose her preferential position in the British market vis-à-vis the Yaoundé Convention countries, which are competitive exporters of coffee and livestock products. What the United Kingdom and Kenya should certainly press for, and what other members of the EEC should agree to, is that the eventual system of the enlarged EEC should be a free-access one for Associates, like that of the United Kingdom, rather than the more restrictive régime of the Six. The eventual shape of the import régime of the EEC becomes therefore of cardinal importance for an employment-oriented strategy. An outward-looking EEC policy, taking account of Kenya’s social problems and growth potential, is perhaps the most important way in which donors conscious of these problems could aid her.

The East African Community, especially in view of its prospective enlargement to encompass Zambia, Burundi, Ethiopia and Somalia, will continue to offer good markets for meat, milk, vegetables and cereals. Still, the real problem with those products (especially meat and dairy products, which tend to attract a large share of rising incomes) is one not of marketing but of the likely rise in internal consumption. Kenya could move from exporting to importing such products. (For the same reason, imports of vegetable oils and sugar could rise sharply.\(^2\)) This outlook would, of course, be improved by production and price policies described in the chapter on agriculture. Of particular

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\(^1\) The Yaoundé Convention (which came into effect in 1964), covering French-speaking African countries, created a much closer relationship. Preferential treatment goes further on both sides, with arbitration provisions and undertakings on substantial financial and technical assistance.

\(^2\) Of course, if the growth of incomes slows down precisely because of the foreign exchange bottleneck, the consumption of food will rise more slowly and more foodstuffs will be released for export markets. There is thus a sort of safety valve in the working of the Kenyan economy. But while its operation would automatically ease the strain on the balance of payments, it would also imply a dangerous slowing-down in the expansion of incomes and employment.
Employment, incomes and equality

importance are higher meat prices to encourage livestock output, and a poultry campaign, so as to enable beef to be released for export.

Another line of advance would be to export products in more highly processed and therefore more employment-generating forms. Exports of dairy products are subject to pressures of home demand, but there are very bright prospects for tinned fruit and vegetables, and other possibilities include instant coffee and tea, as well as tea in bags.

Exportable supplies are very sensitive to differences between trends in food production and consumption. If farm production rises at 6 per cent (the least rate compatible with the objectives of this report), then agricultural exports could grow by more than 6 per cent a year \(^1\) (led by tea and maize, each with a possible growth rate of some 10 per cent). \(^2\) In fact, exports of agricultural products have grown by more than this since independence (although the expansion of domestic demand has been considerably slower than is implied by the mission’s programme, and there was a big rise in coffee exports that cannot be sustained).

Tourism

A major contribution could be made by tourism. In Chapter 12 we discussed the main issues raised by tourist development—issues that are not only economic. Some of the problems it poses can be alleviated by policies discussed there, especially by constructing less capital-intensive facilities. Proposals we have made in the field of public finance would also probably increase the benefits from tourism. Proposed tax changes would decrease profit remittances. On the other hand, raising indirect taxes would, by making drink (for example) more expensive, increase the expenditure of tourists in Kenya—such measures would not make much difference to the total cost of a foreigner’s holiday (which is in any case influenced primarily by what is printed in tour operators’ brochures which rarely, if ever, mention such matters). \(^3\)

The volume of tourism has risen by more than 20 per cent per annum in the past few years. By the end of the decade, tourist receipts would, if they continued to grow at that rate, greatly exceed the total receipts from coffee, tea and all other commodities put together. However, this rate could hardly

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\(^1\) Since food consumption would grow by less than 6 per cent. Although there could also be rising sales to industry (some for export in processed form), a steady-to-fast export expansion would be possible. The expansion suggested here is not inconsistent with the Development Plan’s projections which envisaged a 7 per cent per annum growth for crop exports in 1967–74.

\(^2\) Making the former before the end of the decade as big an earner of foreign exchange as coffee, exports of which will grow more slowly.

\(^3\) Such measures turn the terms of trade in favour of Kenya, in respect of tourism. This is, of course, especially beneficial in so far as tourism is limited by shortage of accommodation.
be maintained through the 1970s. An economy that becomes really dependent on tourism (in the sense that this sector pays for most of the imports of the other sectors), like many in the Caribbean, finds that arguments of the type "we'd better not do this or it might discourage tourism" become frequent. This introduces an irrational element into policy formation, and one which would at times bias decisions against the kind of policies proposed in this report.

Nevertheless, the risks of over-dependence on tourism would not begin to be really powerful until tourism was approaching a level of foreign exchange earnings of, say, about one-third of the total, that is to say, some £50 to £60 million by 1978. This would be more than double the present level and would permit an expansion of over 10 per cent per annum. Although a steady upward trend in Kenya's receipts from transport services can be expected to continue, the service sector clearly cannot be expected to carry the main burden. A big part of the task of putting the balance of payments on a more secure footing has to be carried by the goods-producing sectors.

Short-term policies

There are two types of policy here: global and specific. One global instrument is exchange rate policy. For a country like Kenya, producing a wide range of goods which are also consumed internally, changes in exchange rates can have a big effect in shifting the balance between domestic consumption and exports; and in many foreign markets, small shifts in export prices may make quite a difference. The rate needs to be continually reviewed to see whether it needs adjusting. The recent devaluation (in line with the US dollar) was no doubt a step in the right direction, but it might be desirable before long to take further measures (not necessarily on exchange rates) in order to discourage imports and encourage exports, of both primary and secondary products. Fiscal measures of the type discussed in Chapter 16 could have similar effects.

But more specific measures may be necessary to close the trade gap and enable the expansion of private and public investment to be resumed rapidly. One possibility would be to ban completely imports of goods that are bought only by a small minority. A leading example is the private car. A 12-month ban on imports of larger or luxury cars would not cause much inconvenience, since there is already a large stock of motor cars in the country, with several years

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1 It might be advisable, however, to omit coffee from any future devaluation, since big production increases would be unwelcome. (This can be done either by establishing a special coffee exchange rate, or imposing an export duty.) Exchange rate adjustments should, of course, be made in consultation with, and preferably in step with, other East African countries.
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of life. (This would need to be accompanied by a transfer tax or a sharp increase in licence fees on existing vehicles to prevent a large rise in used car prices.) A second line of attack would be to curtail consumption of products that could be exported. Thus livestock products could rapidly be diverted to foreign markets if consumption were reduced by raising prices, and this would also have a longer-term effect on production.

Naturally, such measures would not be popular—but then neither would slower economic growth and rising unemployment. A strategy which strives to combine fuller employment with rapid economic growth and a wide spread of its benefits cannot be painless.
Fair access to opportunity is (for reasons which emerge at many places in the report) intimately involved with the whole range of Kenya's employment problems. Fair access covers not only the ability of adults to earn sufficient income to attain a reasonable standard of security and well-being, but also access for adults and children to a whole range of services, particularly education and health, which greatly influence the chance an individual has of developing his potential and obtaining, now or later, a reasonable livelihood. Equality between men and women, between persons of different ethnic and tribal groups and between persons in different regions of the country is also involved.

Kenyan policy in this area is clearly articulated in the Constitution of Kenya, which states: "Every person in Kenya is entitled to the fundamental rights and freedoms of the individual whatever his race, tribe, place of origin or residence or other local connections, political opinions, colour, creed or sex." ¹

Although economic development has been rapid since independence, it has by no means proceeded in a uniform manner in all parts of the country or among all groups of people. The concentration of change in certain areas reflects in part the uneven distribution of natural endowments, in part colonial history, and in part the very process of development, as a result of which some areas almost inevitably move ahead faster than others. The Government, of course, has not been blind to these disparities and has taken some important steps to correct them; but in spite of these, the mission was left with no doubt that much more active steps are now required, both to implement the strategy of redistribution from growth and to reduce the gross disparities that underlie the structural causes of the employment problem.

¹ Constitution of Kenya, p. 32.
Employment, incomes and equality

Table 45. Females as a percentage of total primary-school enrolment and of total population, by provinces, 1969

<table>
<thead>
<tr>
<th>Province</th>
<th>Girls as percentage of primary-school enrolment</th>
<th>Females as percentage of total population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>45</td>
<td>52</td>
</tr>
<tr>
<td>Coast</td>
<td>35</td>
<td>49</td>
</tr>
<tr>
<td>Eastern</td>
<td>40</td>
<td>52</td>
</tr>
<tr>
<td>Nairobi</td>
<td>45</td>
<td>41</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>15</td>
<td>46</td>
</tr>
<tr>
<td>Nyanza</td>
<td>37</td>
<td>51</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>37</td>
<td>48</td>
</tr>
<tr>
<td>Western</td>
<td>42</td>
<td>52</td>
</tr>
<tr>
<td>Whole country</td>
<td>41</td>
<td>50</td>
</tr>
</tbody>
</table>

Sources: Ministry of Education; Annual report; Population census, 1969.

Equity for women

Women generally have had less access to the schools in Kenya than have men. In 1969, over 90 per cent of women above 40 years of age had never been to school; nor had over 75 per cent of women aged 25-40. Even in the 10–24 age group, less than 50 per cent of females had any schooling and less than 25 per cent had completed more than standard 4, often considered a minimum for permanent literacy. Although there has been a steady rise in the enrolment of girls in primary school in recent years, table 45 shows that there is still far to go before girls and boys have comparable opportunities.

The seriousness of the shortfall in female enrolments varies considerably. It is largest in the semi-arid areas where pastoralism is the dominant mode of subsistence. Such consistent under-representation is an historical condition of long standing, though the balance has been improving steadily in recent years except for Coast and North-Eastern Provinces. Thus there is evidence that the concern of the Government to work towards universal primary education is having an effect towards equality in rates of school attendance between girls and boys.

The achievement of parity in basic education is of importance because it will enable women to play a more effective role in the society and economy of Kenya. Women without education are unable to help their children during their years in school, or before. Illiteracy and inability to count are major obstacles to the later acquisition of skills.

As regards secondary education, the enrolment of girls in form 1 has been rising rapidly in recent years, from a nation-wide representation of 25 per cent...
Table 46. Secondary-school enrolment, 1969

<table>
<thead>
<tr>
<th>Province</th>
<th>Form 1 Total enrolment (thousands)</th>
<th>Percentage of girls</th>
<th>Form 4 Total enrolment (thousands)</th>
<th>Percentage of girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>9.3</td>
<td>35</td>
<td>4.0</td>
<td>24</td>
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<tr>
<td>Coast</td>
<td>3.6</td>
<td>27</td>
<td>1.7</td>
<td>24</td>
</tr>
<tr>
<td>Eastern</td>
<td>5.7</td>
<td>29</td>
<td>1.7</td>
<td>25</td>
</tr>
<tr>
<td>Nairobi</td>
<td>6.4</td>
<td>37</td>
<td>4.4</td>
<td>27</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>0.0</td>
<td>3</td>
<td>0.0</td>
<td>—</td>
</tr>
<tr>
<td>Nyanza</td>
<td>5.5</td>
<td>26</td>
<td>1.9</td>
<td>19</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>5.1</td>
<td>28</td>
<td>2.0</td>
<td>20</td>
</tr>
<tr>
<td>Western</td>
<td>4.3</td>
<td>26</td>
<td>1.6</td>
<td>22</td>
</tr>
<tr>
<td>Whole country</td>
<td>39.9</td>
<td>31</td>
<td>17.3</td>
<td>24</td>
</tr>
</tbody>
</table>


Table 47. Percentage of women in formal-sector wage employment, by economic sector, 1963–70

<table>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
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<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>19</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>6</td>
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<td>11</td>
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<td>10</td>
</tr>
<tr>
<td>Transport</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Services</td>
<td>16</td>
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<td>16</td>
<td>16</td>
<td>16</td>
<td>22</td>
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<tr>
<td>All sectors *</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>13</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>

* Includes public sector. The coverage of these over-all figures includes a number of sectors in which very few women are employed, and which are not listed elsewhere in the table.


of form 1 places in 1967 to about 30 per cent in 1970. On the other hand, drop-out rates are high, and relatively few girls complete form 4, as indicated in table 46.

Although girls' enrolment in secondary schools is growing at a rate higher than that of boys, their survival rate in the educational system is lower. For example, of 5,100 girls who enrolled in form 1 in 1965, only 71.5 per cent entered form 4 in 1968, as against 78.5 per cent of boys. A higher proportion of drop-outs among girls is also noticeable at higher school certificate level. This further brings down the number of girls having access to higher education, and especially to the University. The percentage of girls in the sixth form in the 1965–70 period was between 19 and 20 per cent. At the time of the census, fewer than 25,000 Kenyan women had completed their secondary education.
These disparities in educational attainment, combined with educational criteria as absolute requirements for wage employment, bar most women from access to jobs in many occupations and industries. Table 47 summarises the participation of women in enumerated wage employment since 1963.

Employment rates of women in the formal sector have remained almost constant since 1963. Marginal declines in agriculture have been matched by some increase in the employment of women in services. Over-all, the rates are still low, particularly in manufacturing.

In various parts of this report we have drawn attention to other respects in which young girls and women are at a disadvantage as regards both urban and rural employment, and to the heavy incidence of unemployment and poverty among women. Many historical, cultural, economic and social factors underlie this situation. Though the status of women is improving, the remaining inequality is a serious economic burden and holds down productivity, particularly in rural areas. In the rural sector, Kenyan women need to be given wider opportunities for training in agriculture and in related rural crafts. More women—and women from different rural groups—need to be trained in co-operative organisation, community development and other rural leadership skills. In the industrial sector, their employment prospects are severely limited, but this may change with the spread of education for girls and more favourable attitudes towards women's employment in various parts of this sector. In the services sector, new opportunities are opening up fairly rapidly in the health and education fields, and girls will need to be encouraged and educationally and vocationally prepared to take advantage of them. Also, there should be opportunities for part-time work specially suited to women with household duties.

Of course, in Kenya as everywhere, the employment pattern of women is and will remain complicated by the burden of family and related responsibilities which they are called upon to shoulder. A particular effort is needed to cut down the load of household drudgery and the time spent on household tasks, especially in rural areas. Too often, measures to increase productivity are planned to too great an extent in terms of economic activities. Too little effort goes into raising women's productivity in general. For village women, action that can be taken for that purpose includes steps to introduce adequate water supply, simple mechanical methods of performing time-consuming and heavy work formerly done by hand, economical means of food preparation, conservation, processing and refrigeration, and community organisation of certain types of facilities for recurrent household chores such as sewing and washing. For town women this includes, in particular, provision for child care and education in new methods of shopping and spending, and hygiene. Although self-help crèches can largely be organised and run by women themselves, government support is needed (and is more than justified economically) to provide training...
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for leaders, assistance (obtaining land, etc.) in starting crèches, and some continuing supervision. Although activities are under way in many of these areas, especially on the part of the women’s organisations, such changes still touch only a small minority of women, and often only the élite.

For women, in both town and country, a major problem for efficiently combining economic activities and household responsibilities is the possibility of working near to their children and within a timetable that permits part-time work and fits with their other duties. Informal-sector activities are, almost by definition, more adaptable in these respects, and this is yet another argument for the policies we propose to encourage them.

Outside employment, the legal and political position of women needs a fundamental review so that women may be encouraged to play a fuller part in the general life of the country, both nationally and at the local level. Already, of course, there are outstanding examples of women in the forefront of public life; but too often they appear as the exception rather than the rule. With changes in education and employment policy, changes elsewhere will be set in motion. But they would be helped in many cases by basic changes in the legal rights of women and by a clearer recognition politically of the contribution that women have to make—and have already made, most notably in Kenya’s independence movement. In Chapter 19 we suggest that district-level planning committees should include a minimum of 15 to 25 per cent of women members. Systematic consideration should be given to the greater involvement of women in other social and political activities at the local and national level and to the best ways of achieving this. Initially some sort of public information campaign (through the women’s organisations and the mass media) might be desirable. The women themselves, through their organisations, will have to play a primary role in this; otherwise no change can be effective.

The specific problems of the integration of women in the economy and in society seem important enough from all standpoints to warrant special and sustained attention. Already there are discussions about establishing a women’s bureau. The mission would strongly support the creation of such a bureau, which would be small but competently staffed, placed at a high level in an appropriate ministry or in the President’s office and given the primary task of acting as a watchdog over women’s interests with a view to promoting their integration in the economy on the basis of equitable access.

Given the fact that women’s status in economic life is closely linked with their status in other areas (e.g. political life, private and family life, social status), it is also recommended that the Government should undertake a more general review of the status of women with a view to seeing what action may be needed to remove handicaps to their full contribution to the development of their country. A national commission on the status of women, made up of men
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and women from various walks of public and private life, might be the vehicle for study and more specific recommendations for action.

Regional imbalance in access

Differential access on a regional basis to such advantages as roads, education and development projects is closely related to economic disparity, and is thus a major force behind migration, both from the country to the towns and from one rural area to another. Particularly serious is the way in which regional imbalances interact with tribal fears and forces, partly as a cause and partly as a result. The report of the National Assembly's Select Committee on Unemployment showed tribalism to be an aspect of regional and ethnic inequality with serious effects on social and economic progress: "Where tribalism exists, many of the recommendations made in this report (for example, equitable distribution of development efforts geographically, equitable distribution of incomes, decentralisation of industry, efficiency in the civil service) cannot be implemented."¹

It is important to distinguish tribalism, in the sense of discrimination and prejudice based on ethnic groupings, from a general sense of tribal identity. Tribal identity can have many positive aspects. It has been a major element in the Harambee movement which has contributed so much to Kenya's development effort. Furthermore, tribal identity is reinforced daily by the use of tribal language, folklore and folk music, continued geographic tribal clusters, eating habits and food preferences, burial ceremonies, and so on. These tribal aspects of social life are Kenya's positive cultural heritage and are rightly encouraged by the organisation and display of tribal dances, folk music and art. The challenge is to develop a policy of integrating Kenya's ethnic diversity into a differentiated whole, free from the debilitating effects of tribal prejudice and discrimination.

Regional differences are one serious source of prejudice and discrimination, particularly when linked to individual differences in access.

Table 48 shows the wide differences that exist with respect to availability of schooling. If the provincial figures are broken down, further disparities emerge between districts. All the semi-arid or arid areas have very low rates, not only in North-Eastern Province but also within drier areas of Coast, Eastern and Rift Valley Provinces.²

The provision of health services presents another source of imbalance. Nairobi currently has over 3,200 out of a total of just under 14,000 hospital

² See also Technical Paper 24.
Table 48. Distribution of social services by province, 1970

<table>
<thead>
<tr>
<th>Province</th>
<th>Percentage of total population, 1969</th>
<th>Percentage of school enrolment, 1970</th>
<th>Percentage of NHC 1 housing expenditure, 1970</th>
<th>Number of people—per hospital bed</th>
<th>per medical practitioner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rift Valley</td>
<td>20.4</td>
<td>14.7</td>
<td>12.1</td>
<td>6.0</td>
<td>820</td>
</tr>
<tr>
<td>Nyanza</td>
<td>19.4</td>
<td>16.1</td>
<td>13.1</td>
<td>1.2</td>
<td>1 269</td>
</tr>
<tr>
<td>Eastern</td>
<td>17.4</td>
<td>20.2</td>
<td>13.6</td>
<td>2.4</td>
<td>834</td>
</tr>
<tr>
<td>Central</td>
<td>15.3</td>
<td>24.9</td>
<td>22.9</td>
<td>15.1</td>
<td>766</td>
</tr>
<tr>
<td>Western</td>
<td>12.3</td>
<td>13.1</td>
<td>10.1</td>
<td>2.9</td>
<td>1 033</td>
</tr>
<tr>
<td>Coast</td>
<td>8.6</td>
<td>6.3</td>
<td>9.3</td>
<td>7.2</td>
<td>511</td>
</tr>
<tr>
<td>Nairobi</td>
<td>4.4</td>
<td>4.4</td>
<td>18.7</td>
<td>65.2</td>
<td>152</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>2.2</td>
<td>0.3</td>
<td>0.2</td>
<td>—</td>
<td>1 308</td>
</tr>
<tr>
<td>Whole country</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>715</td>
</tr>
</tbody>
</table>

1 National Housing Corporation.

beds in the country.1 No other province has such a high total, although Central Province has 1,880 beds (with the result that the total number of beds available within a relatively small area is more than 5,000—over one-third of all hospital beds in the country). This imbalance of facilities is matched by an even more unequal distribution of medical personnel. 2

The reduction of regional inequalities calls for at least three main lines of action. The first of these is that, over the long run, new facilities must be provided in order to achieve a more equal distribution between regions and within districts and locations. As long as schools, health centres, hospital institutions, water supplies, training centres and other facilities are unequally available, the population in each area will obtain unequal service—unequal both in quantity and in quality. Moreover, to make provision for more equal allocation of facilities will require changes far beyond the mere selection and balance of projects included in district construction programmes. In terms of financing, it will require fundamental changes in the pattern of government revenue and expenditure, on the lines outlined in Chapter 16. If the poorer districts are to be given a chance to catch up, resources must be transferred from the richer districts. To operate on the principle that each district primarily relies on its own resources would not only be insufficient, but would reinforce cumulative tendencies in which the richer districts would grow faster while the poor lagged behind.

1 Admittedly, some of these serve as teaching hospitals or are otherwise geared to national needs. Some concentration is inevitable, but not to the extent that it occurs.
2 See also Chapter 12.
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This is true also of the Harambee movement, if its full value is to be realised. Low family and district incomes make it difficult to redress imbalances between poor and rich districts by the use of Harambee efforts. These undoubtedly have a place, but will have to be given special support in the poorer districts by additional resources and finance from outside. The rural works programme outlined in Chapter 19 would provide a major source for such support.

The reallocation of more and better staff to the poorer districts is somewhat easier than the rapid construction of buildings (though even here construction is involved since staff require housing). Special incentives could be used to encourage more and better teachers, medical assistants, extension officers and others to move to the less favoured areas. It would be useful, for instance, to require newly qualified doctors to do a turn of duty in rural areas before further training. As suggested in Chapter 12, a period of service in the rural areas or in the more backward districts could be required periodically of all civil servants before they were eligible for further promotion. Other such schemes are possible.

The provision of better health care in the more backward rural areas illustrates some of the other requirements for reducing regional inequality. Particular districts, especially those in the arid and semi-arid regions, have particular health problems which require special remedies. This is a matter not only of extra resources but often of action-oriented research directly focused on dealing with these problems.

A long-term programme for reducing inequalities between regions thus has implications for the balance of research activities in the country, not only in health but in agriculture, education and elsewhere. Even so, many years must inevitably elapse before the extreme inequalities between districts and regions which have been inherited from the past are eliminated entirely. Yet unless strong measures are taken to reduce the impact of these inequalities, the frustrations and resentments they engender could be a real threat to the nation's stability, particularly if allowed to interact with tribalism. Thus in the short run, a second line of action is required to reduce inequality before the long-term measures can take full effect.

The mission proposes therefore, as this second line of action, that a system of quotas be considered; this would operate in various sensitive fields as an interim measure. In Chapter 14, quotas are proposed to ensure more equitable access to secondary education between and within districts. A quota system on the lines proposed should obviously not operate with complete rigidity or in such a way that individual or group incentives were eliminated.

It would also be useful to consider the use of quotas elsewhere—for instance, in recruitment to the civil service, on the lines now used in the armed forces and in the Kenya National Youth Service. This could be helpful, since applica-
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tions for many government posts are now very numerous and applicants are often over-qualified. It is already difficult for personnel officers to make selections which are unbiased, let alone which appear to be unbiased.

Most important, however, and linking up with our over-all strategy of shifting emphasis from the centre to the periphery, we suggest that government expenditure in vital development sectors be subject to quotas, limiting ceilings in the case of Nairobi, and rising floors in the case of disadvantaged regions and locations. Clearly, the adoption of this principle would require much detailed study and careful preparation and administration. A committee, possibly a parliamentary committee to review all government expenditure (which we recommend in Chapter 16), might have a role to play here.

The third line of action is to provide a framework within which imbalances between districts can be removed by the orderly transfer of people and resources from the more to the less crowded districts. In some respects, this is a natural process of adjustment; but it is hindered by the very understandable (and not unfounded) fear that uncontrolled migration from the richer to the poorer districts of the country will swamp the poorer. Chapter 10 indicates a further way in which quotas might be used—again, not to rigidify the present situation but to allow change at a steady and known rate, sufficient to permit considerable adjustment over time but not so fast as to arouse fears, harden attitudes and postpone any change.

Inequality between men and women and between regions and districts are, of course, only two of the many respects in which the problem must be tackled if access is to be brought more closely in line with the objectives of Kenya's Constitution. Other parts of the report have taken up other aspects of imbalance and inequity, and the whole thrust of the strategy of redistribution from growth implies a general shift in favour of the poorer sections of the population. When translated into action, this involves change in many particular policies towards many of the deprived groups identified in Chapter 4. It is important not to lose sight of the links between all these problems, both in analysing the problems and in planning their solution. Chapter 19, on rural development and planning, indicates some of the new approaches that will be necessary if planning is to lead to growth of a sort that is more fairly distributed among the different sections of the population.

1 See Chapter 7.
The importance of an increase in agricultural output as the key to improving rural incomes and increasing rural employment has been emphasised in Chapter 10. Such an increase will create additional demand for goods and services, stimulating other production in the rural areas and leading to additional increases in rural employment, which in turn will provide casual or regular employment for at least some of the people who cannot earn sufficient income from their land.

This is the fundamental logic of integrated rural development: that raising agricultural incomes, particularly among the poorest rural families, will stimulate other advances which in turn will raise standards of nutrition, housing, water supply, health—in short, standards of living in general. Although this process must primarily be led by increased agricultural output, the wider effects on rural development can be anticipated and planned for.

The principle of integrated rural development is already accepted in Kenya, and indeed underlies the pioneering projects of the Special Rural Development Programme. The lessons of that programme are of enormous importance to Kenya, and for the promotion of integrated rural development in other countries, and it is essential for the Government to carry out a thorough and continuous evaluation of the reports of the programme and to take account of them in all aspects of rural policy. Although that is in general accepted, it was the mission's impression that in some ministries too much policy was still being made along hierarchical lines from headquarters instead of through consultation at the local level among the field officials of the various departments concerned. Our support for planning at the district level, as outlined at the end of this chapter, is designed to remedy this.

Many elements and programmes must be pulled together in the process of planning for integrated rural development. A number of them have been noted in other chapters outlining the strategy of this report. But short of
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making plans at the district level, it is not possible to indicate how each of the various elements and programmes must be combined and varied to match the needs and resources of each locality. That is the next stage in planning, and the task of the planning groups at the district level.

In this chapter, we first take up three aspects of integrated rural development not yet covered in the report. We begin with measures designed to remedy periodic shortfalls in food and incomes, particularly shortfalls from famine due to crop failure. These are an essential part of a comprehensive programme to improve the living standards of the poorest part of the population which includes not only people who live below the poverty line continuously but also those whose means of livelihood are so precarious that periodically they are thrown below it. The discussion of famine relief leads naturally to a rural works programme, designed as a supplement, not a substitute, for the agricultural programme outlined in Chapter 10. This in turn leads into the nature and needs of a more general programme for improving rural amenities.

The minimum income targets of these and other programmes proposed in the report must be brought together within a new framework of planning at the local level. The Government is already making a start along those lines, but in the final part of this chapter we indicate some further action required to make a reality of integrated rural development.

Famine Relief

The creation of potential famine situations due to the migration of people into marginal farming areas was mentioned in Chapter 10, and acute famines are already periodically experienced in the semi-arid areas.

Famine or severe food shortage can, in the short run, lead to nearly total disruption of the environment on which people normally depend for food and livelihood. Many people are left destitute and temporarily unemployed, as for example those who live in famine relief camps at Isiolo, Marsabit and Tharaka. The cost of drought to the nation, including the direct costs of relief services, production losses and social costs such as family breakdown, are larger than is often realised. (Conservative estimates of the direct costs in famine relief alone of the 1961 famine and 1970–71 famines are £600,000 and £1 million respectively.)

If the problem of discouraging dependence on famine relief is to be tackled more realistically, the main reason for such relief—i.e. a sudden and critical shortage of food or of essential components of the diet—must be clearly distinguished from the more continuing deficiencies dealt with in everyday welfare work. The welfare cases—people in the poorer zones of the country, young people in food deficiency areas, invalids and beggars and some old
persons in the towns—must be handled by government welfare programmes rather than by famine relief.  

If freed from the burden of welfare cases, famine relief could in part be handled differently through the rural works programme, as described later. The crucial point is to ensure that projects are introduced long before the food shortage in order to reduce the effect of famine and to avoid the development of dependence on the part of recipients.

All stabilised agricultural systems have ways of coping with extreme physical conditions such as drought. Many of these practices and elements of organisation have been institutionalised over the years, and are now permanent features of the agricultural mixture of crops and livestock and the widely spaced network of farm fields, cattle camps, and fields belonging to kinsmen which spread over large areas. These ensure that at least some crops are unaffected or little affected during a local drought. They are forms of agricultural insurance or adjustment mechanisms, effective for a drought which is local but not for one which is regional or national. In the latter cases, other practices and arrangements appear which one does not often encounter during normal rainfall seasons. Such “adjustments” encountered at farm level include those listed on the following page.

It should be clear that a reasonable low-cost approach to the problem of drought would be to design government agricultural extension, credit, training, rural industrial, settlement and other programmes to complement and foster the most effective and widely practised traditional methods of adjusting to lack of rainfall. The agricultural component of this approach has been spelt out in Chapter 10.

This exploitation of indigenous adaptation mechanisms should be tied to water development programmes and self-help activities, and used to train the villagers to be more self-reliant. In northern Kenya, for example, the provision of waterholes appears to be a sufficient prerequisite for settling the nomadic tribes. This should not lead to the abandonment of long-range cattle grazing, since farming is more risky than this type of stock raising. As in the farming areas, the approach should be to strengthen the positive aspects of the traditional practices so as to increase adaptability to the harsh environment. It should be accepted that, for some time, the alleviation of famine and suffering in these areas, like the attainment of the minimum income targets, will largely depend on the initiative of the local people themselves. There are nevertheless several ways in which the Government can assist the local people.

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1 The case for a programme of state welfare on these lines has been clearly stated in Sessional Paper No. 10 of 1965, the manifesto of the Kenya African National Union (KANU) and the Development plan for the period 1970 to 1974.
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How the individual may adjust to lack of rainfall at the farm level.

<table>
<thead>
<tr>
<th>Function of adjustment</th>
<th>Specific adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affect the rainfall source</td>
<td>Pay a rain maker</td>
</tr>
<tr>
<td></td>
<td>Pray</td>
</tr>
<tr>
<td>Increase moisture availability by—</td>
<td>Plant larger areas</td>
</tr>
<tr>
<td>Change of location</td>
<td>Plant scattered plots</td>
</tr>
<tr>
<td></td>
<td>Plant in low-lying wet places</td>
</tr>
<tr>
<td></td>
<td>Move cattle to new grazing areas</td>
</tr>
<tr>
<td>Improving soil moisture storage and distribution</td>
<td>Make ridges</td>
</tr>
<tr>
<td></td>
<td>Irrigate</td>
</tr>
<tr>
<td>Scheduling for optimal soil</td>
<td>Plant dry</td>
</tr>
<tr>
<td></td>
<td>Plant with the first rains</td>
</tr>
<tr>
<td></td>
<td>Plant early</td>
</tr>
<tr>
<td></td>
<td>Wait to plant only with obviously enough rain</td>
</tr>
<tr>
<td></td>
<td>Stagger planting</td>
</tr>
<tr>
<td>Reduce moisture need by—</td>
<td>Weed more</td>
</tr>
<tr>
<td>Eliminating moisture waste</td>
<td>Stop planting when rains are poor and keep fields fallow</td>
</tr>
<tr>
<td>Changing the physiological or technical</td>
<td>Plant drought-resistant crops</td>
</tr>
<tr>
<td>requirements of crops</td>
<td>Plant drought-escaping crops</td>
</tr>
<tr>
<td>Diversify into other activities</td>
<td>Look for wage work near by</td>
</tr>
<tr>
<td></td>
<td>Look for wage work far away</td>
</tr>
<tr>
<td></td>
<td>Sell cattle</td>
</tr>
<tr>
<td></td>
<td>Use savings</td>
</tr>
<tr>
<td></td>
<td>Hunt or fish (perhaps poach)</td>
</tr>
<tr>
<td></td>
<td>Collect bush foods</td>
</tr>
<tr>
<td></td>
<td>Draw upon a previous bumper crop</td>
</tr>
<tr>
<td></td>
<td>Turn to non-farm economic activity (produce charcoal, make bricks, practise a trade or craft, keep bees or brew beer)</td>
</tr>
<tr>
<td>Distribute or share loss</td>
<td>Send children to kinsman</td>
</tr>
<tr>
<td></td>
<td>Move to a kinsman's farm</td>
</tr>
<tr>
<td></td>
<td>Move to a settlement scheme</td>
</tr>
<tr>
<td></td>
<td>Ask help of friends, family, community</td>
</tr>
<tr>
<td></td>
<td>Ask help of the Government</td>
</tr>
<tr>
<td></td>
<td>Ask for a loan or other help from the co-operative</td>
</tr>
</tbody>
</table>

The East African Meteorological Department is already going ahead with an improved network of meteorological stations for agricultural areas.\(^1\) We recommend that the Department be given support and requested to site some of its new stations in areas of highest famine potential. They should thus be

\(^1\) It would be useful to investigate the value of supplementing the station network with a cluster of “remote sensing” techniques which enable assessments of water stress, disease incidence, etc., to be made over a wide area of farms before they can be observed on the ground.
able to provide needed technical support for any future programme of experimentation with dry land farming and also to contribute to a scientific famine warning system. Other elements in such a warning system would have to include improved agricultural reporting, food marketing and nutritional vulnerability studies and food reserves estimates.

We have already recommended that an investigation be made as a matter of urgency into the research needs of medium-potential farming areas. Such an investigation might incorporate regional research into natural hazards, analysing environmental data and the development of optimal land use patterns for the high-risk areas of Kenya. It could usefully be related to the work being done in other centres of international drought studies such as Australia, Brazil, Mexico, Nigeria and Tanzania; and it should be multi-disciplinary to achieve better simulation of farmer situations in these uncertain environments.

A number of programmes should be devised in order to promote relief in the inevitable famine years. As more settlement takes place the importance of these measures increases. First a series of labour-intensive public works projects should be formulated. Projects relating to such matters as roads, bush clearing, soil conservation and dam construction would be suitable. The projects should be planned in detail but shelved until the onset of drought is perceived.

Special financial provision by the Treasury will be required, because it will not be possible to forecast the occurrence, extent or duration of a drought a year in advance. It is desirable, though not necessary, for the projects to be located in the drought areas. If transport is arranged it is possible to move workers to other areas. This removes some food consumers from famine areas, and they can remit cash to their dependants who remain on the farm. It would also assist migration to job opportunities if the main centres had government labour exchanges advertising temporary as well as permanent vacancies. Those agencies should be empowered to advance travel expenses to be recovered from the employer.

RURAL WORKS

The agricultural programmes outlined in Chapter 10 to increase employment and incomes could be substantially assisted by appropriate rural works programmes, both to provide additional incomes and directly to help develop rural services. We are here concerned with rural works from district to village level, i.e. those that are of direct benefit to the population of the area. Such works include roads; rural water works, including boreholes, dams, weirs,
irrigation and piping; soil conservation works such as furrows and terraces; public buildings such as community halls; cattle dips; bush clearing; and emergency airstrips.

Rural works contribute to employment and incomes in several ways. Their primary role is to serve as catalysts for increasing rural production and productivity, mainly in agriculture. This increases the number of jobs in agriculture. Most of the existing rural works projects, such as water schemes and unclassified roads, are small and scattered throughout Kenya, thus lending themselves to highly labour-intensive methods and contributing to a better spread of incomes. Those incomes are often ploughed back into more investment in agriculture or non-farm enterprises, and in turn generate more employment. Construction work and the continued maintenance of rural works create employment and generate incomes within the local area. They also contribute to social welfare and the attractiveness of rural areas. A fourth point, which is sometimes overlooked, is that rural works can act as a focus for participation and involvement, giving a sense of achievement and rural advance and enhancing productivity in other fields, such as farming.

Rural works programmes must be integrated with other aspects of local development. At present, local people often appear to overestimate the importance of roads by comparison with other projects such as water schemes, extension services or cattle dips. There has been a tendency for local works to be planned hastily, particularly when initiated at the end of a financial year to use up unspent funds. Part of this problem could be solved by greater emphasis on planning at the district level.

During the colonial period, those in need of famine relief or poll tax relief were often made to work on public works projects. Unfortunately those projects were often started when people were already weakened by hunger and suffering or were too poor even to feed themselves. By contrast, it would be desirable whenever possible to initiate a public works programme in advance of desperate need, so that the wages paid are available to relieve the impact of famine or cash shortage before the crisis occurs. The proposed meteorological stations for agricultural areas would help to give famine forecasts. We therefore recommend that the Government should prepare a series of ready-made projects that can be shelved until a regional shortage of cash or food is predicted, and that the projects be initiated well in advance of an outbreak of famine, while the local people are still able to exert themselves.

More generally, rural works should be phased with the supply and demand of agricultural labour, so as to avoid seasonal bottlenecks. If rural works are carried out mainly in the agricultural slack season, before planting starts, the wages can be used for investment in seed, fertilisers, ploughing and weeding, thus reducing the need for agricultural credit programmes and avoiding at
least some of the administrative problems associated with them. We recommend that this possibility be thoroughly examined, especially in areas where it is planned both to plant Katumani or hybrid maize and to build roads. District planning teams should be specifically asked to make proposals along these lines. Although situations will vary from district to district depending on local
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conditions, for the determination of a rural works campaign season an example (the Nyeri district) is given in figure 2.

Rural works have proved ideal for local Harambee self-help, though unfortunately many local people still argue that roads, dams and major works are matters for the Government. It is on the non-Harambee projects that local participation must be planned. Full participation involves skill formation and a continuing commitment to maintain new projects. Public works should not be dropped on rural areas like some foreign body parachuted down by strangers in large machines. Such an approach leaves the population with the feeling that what is built does not belong to them and that they should simply sit and wait for more gifts from more parachute drops. When people are involved from the start they feel it is their own project. They know which are the weak points in its structure and which require particular attention, and usually a good deal about how to repair it. These advantages are important both in themselves and in view of the training and experience related to them.

Rural works programmes should be kept small so as to promote maximum local participation and income distribution. Extensive experimentation with a view to identifying what design principles and which operations would lead to optimum labour intensity should be started by the Government. This is not an argument to ban all machinery from local projects, but it should be noted that once a particular operation is performed by machine, it can be extremely difficult to prevail on people to carry out the same operation manually, especially on a self-help basis.

We recommend a common country-wide policy for rural works, specifying when payments will or will not be made in cases in which self-help, government finance and semi-skilled workers are involved. The Harambee movement relies heavily on the readiness of individuals to work for the common good. The indiscriminate mixing of self-help workers with paid workers creates a dangerous environment for the movement. Projects such as latrines, fencing, sheet iron roofing, dispensaries and schools should be left to Harambee self-help, but assisted with government materials where necessary. On the other hand, public works in the strict sense, such as unclassified feeder roads, large water projects and dam construction, should be wage-paid on the principle of piece work.¹ National Youth Service trainees should be given the opportunity to pass tests as works overseers and to work on these projects at district and village level under an area co-ordinator and with technical supervision by a rural works assistant from the Ministry of Works.

How big should a rural works programme on these lines become? This is a matter of finance, the availability of key skilled manpower—area supervisors

¹ In suitable cases, external financing from the World Food Programme should be sought.
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and skilled artisans like masons—the organisational capacity of the Government and the response of people at the local level. In Technical Paper 30, the mission shows how in its view a programme could be built up over five years to employ about 100,000 people at peak seasons, given finance and a well-conducted large-scale training programme. That figure is quoted not as a firm estimate of what is desirable but as an indication of what would be possible under specified conditions.

Specific decisions on the rural works programme must in our view begin at the district level, where, indeed, most of the organisation of the programme must continue to take place. If the provincial administrations are freed from the task of collecting the graduated personal tax, as proposed in Chapter 16, it would be possible for them to play the leading role in organising and coordinating the programme, with technical support from the Ministry of Works. The programme would thus be decentralised, and the burden of central administration would be eased.

Although the main programme would be essentially seasonal, it might usefully be supplemented in certain districts by a continuing all-the-year programme on a modest scale, directed to the needs of particular poverty groups. In view of the small size of such a continuing programme, it would probably be desirable to adopt one of the several systems devised for rotating the available jobs among jobseekers—limiting employment to periods of a month at a time, or giving priority in hiring to persons from the immediate locality when the rural works are under way.

We would stress that labour-intensive rural works programmes are not simple to administer. Indeed, outstandingly good supervision is required. To build a dam which might require six machines for three weeks would need several hundred men for three or four months. This latter technique would require a camp in remote areas, substantial food and water supplies, police control and continuous work supervision. It has been suggested that the scope for introducing labour-intensive techniques is also limited because machines have been used in the past and the people are not willing to move back to "primitive" methods. For example, efforts by the water development division to introduce hand-operated water-lifting devices from Egypt failed, because the recipients wanted pumps and preferred to be without water rather than use their own labour.

AMENITIES

The term "rural amenities" is used synonymously with the term "rural welfare". It has to do with the level of satisfaction of rural people and involves three dimensions, namely—
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(a) the physical level of living of rural families;
(b) the provision of services and activities to rural villages; and
(c) the provision of opportunities for enjoyable involvement and participation in family and community affairs.

Rural amenities include better housing, better food and equipment, electricity, schools, health facilities, sports and games facilities, piped water, marketing centres, traditional music, drama, dance, feast facilities, organised group activities, library facilities and community halls.

Successful rural amenities must follow rural development rather than precede it, being related to peoples’ purchasing power and consumption patterns. Therefore like rural works, the development of amenities must be related to general levels of regional development. Amenities increase the ability of rural people to lead meaningful lives and thus they help to create a balanced rural society from which there is no need to migrate to the urban centres. Amenities are also essential if the slogan “back to the land” is to be meaningful and more acceptable to rural youth and urban migrants.

Stress has already been laid in Chapters 5 and 6 on the extent to which the rural areas have been neglected by comparison with the main towns, and on the need for this imbalance to be rectified by the Government, particularly by raising rural levels of consumption and improving health, education and other services in the rural areas.

The strategy of the current plan is to direct an increasing share of total resources toward the rural areas. We consider that this is essential. These resources should in general be directed toward productive investments. Many amenities are in fact intermediate inputs in productive activities: for example, a protected domestic water supply piped close to the household frees women and children from arduous, time-consuming water carrying and helps meet peak agricultural labour demand. Large quantities of safe water should improve health, with a direct income saving on doctors’ fees, drugs, etc., and an indirect effect through more efficient agricultural labour.

The list of possible projects and activities is long and the precise programme is again best decided in the course of planning at the district level.

Similarly the central Government has a vital role to play in providing finance, training and technical support for some projects—most notably the earlier spring protection programme for rural water supplies (involving several government departments) and the current programme (largely supported by foreign aid) for providing rural piped water. In other fields, however, we suspect that too little has been done in central government departments to identify cheap, small-scale, partly standardised methods of providing basic rural amenities. Yet the returns to such activities in terms of human welfare in
the poorer districts would vastly exceed the returns on more sophisticated planning of major projects in Nairobi. The mission therefore recommends that a programme be put in hand for the systematic exploration of appropriate, simple low-cost methods of improving or providing rural amenities, together with a plan for training district-level personnel in the routine technical work needed to implement the programme. In some cases, also, a plan for manufacturing simple components required for the programme should be prepared.

There should be no question of insisting that such a programme should always, or even largely, be self-financing. Indeed, a good case can be made for subsidising the initial exploration and planning costs, the cost of manufacturing standardised components for rural amenities and, in many cases, the installation costs on the ground. To the extent that these amenities offer benefits to the poorest sections of the population, investment subsidies would be exactly in line with the proposed strategy of redistribution from growth. Quite apart from this, we suspect that the social returns to resources used in this way would be much higher than in many other activities.

The mission would therefore propose the following scheme for financing an expanded programme of rural development:

<table>
<thead>
<tr>
<th>Item</th>
<th>Financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial exploration and planning, training for district staff.</td>
<td>Central government finance—no charge to local users.</td>
</tr>
<tr>
<td>Manufacture of standardised components.</td>
<td>Centrally financed where necessary; possibly components sold at subsidised rates, with the element of subsidy varying from district to district.</td>
</tr>
<tr>
<td>Capital costs of installation.</td>
<td>Sometimes subsidised in the poorer districts.</td>
</tr>
<tr>
<td>Recurrent costs and maintenance.</td>
<td>Locally financed, no subsidy.</td>
</tr>
</tbody>
</table>

The Government also has a role to play in promoting projects that are attractive from the point of view of the over-all social cost and benefit but not from a more partial viewpoint. Reafforestation and the development of minor roads are two examples. Along the Tana River, bunds empounding the flood plain could be built to trap flood water, and crops could then be grown upon residual moisture (estimated costs £35-£40 per acre including levelling). The Select Committee suggests a labour subsidy of 1.50 sh. a day—50 per cent of average wages—for clearing bush on ranches. We support that recommendation.

NEW EMPHASIS IN RURAL PLANNING

The four respects in which our strategy involves major changes in plan procedures are measures to implement the minimum income targets, the
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greater emphasis on local planning, changes in planning at the centre, and explicit concern with the response of the people.

The minimum income targets

If taken seriously, the use of minimum income targets to focus programmes on the needs of the poorest groups in the country would have radical effects on planning at all levels. Planners, officials of government departments and local field officers would be required to identify projects and justify their proposals not merely along familiar economic lines but with explicit attention to the effect of projects and programmes on persons with incomes under the minimum target. At first, the method would inevitably be crude. But as experience and information built up, the assessments would improve in sophistication and reliability, just as over the years economic evaluations have improved with more use of, for instance, cost-benefit techniques and performance budgeting. We are therefore not worried by the fact that the use of minimum income targets would at first provide only a very rough guide to policy, for reference to the targets would focus the mind and energies of many people, and would itself trigger off the process of refinement.

As suggested in Chapter 7, however, the basic minimum income targets must be translated into specific components of living standards to be useful. In the early stages this would require a number of detailed household social surveys in order to identify the current patterns of living, standards of nutrition, housing, education, and so forth in households of different income levels. Naturally, these surveys would need to be made with specific reference to particular areas of the country. University social scientists, geographers and others could play a valuable role, though the main organisation should continue to be a matter for the Government itself. It is essential that the surveys be carried out in a balanced and objective manner, combining full professional standards and the expertise of different social scientists with the local knowledge and experience of both government staff and ordinary people.

These surveys would first establish a base line showing the current situation, its adequacies and deficiencies. In other words, they would show in what respects persons with low incomes (essentially less than the target minimum incomes) had adequate living standards and in what respects there were serious shortcomings in relation to the basic requirements for nutrition, etc.

The next step would be to consider the various ways in making good the deficiencies and then to choose the most appropriate. An important decision would be the choice between dealing with particular deficiencies by a specific

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1 Here we discuss the use of minimum income targets primarily in a rural context, but similar action would be needed in the urban areas.
programme focused on that need (e.g., to deal with malnutrition among young children by free distribution of milk or by an improved child clinic) or to deal with the deficiency by a general programme designed to raise incomes of the poorest people in the area (and relying on these higher incomes to remedy the particular deficiencies noted). Obviously the choice of approach would depend on the relative cost of each, its administrative implications, and so on. In general, there would be a presumption in favour of solutions operating through a general increase in incomes, since they would also have favourable effects in other fields.

The final step is to identify what particular investments, supporting services or changes in government policy are required for the approach chosen. Certain projects and programmes are of crucial importance for implementing the strategy of redistribution from growth. The difficulties should not be minimised at this stage because experience has shown how hard it is to identify the kinds of projects and programmes that will not only succeed but will ensure that at least a considerable proportion of these benefits will accrue to the poorest groups.

Many of the proposals made in the preceding sections of the report have been designed to raise the incomes and living standards of the poorer people in Kenya. In future planning all major projects and policies should be reviewed carefully in the light of their effect on the welfare of the poorest sections of the population. It should not be too difficult to assess in broad terms the distribution of benefits and costs of various social and economic programmes and policies. Indeed, projects should be accepted or rejected not only in the light of their over-all economic return but also expressly on the criterion of how much they contribute to the incomes of persons in the poverty groups.

After the first round of more technical background work, the integration of planning and day-to-day administration would become much closer, additions and modifications to the programmes being made and their impact assessed as a matter of routine and in many different ways, many of them obvious and involving only minor departures from current practice. It is at that stage that the programmes need to be thoroughly integrated at the local level. After all, it would be local workers who would have to assess the impact of the programmes on the lives of different people by personal knowledge and day-to-day contact, rather than by abstract statistics.

Nevertheless, it would be important to set up a national system for monitoring progress towards the targets. Such a system could become part of the machinery for carrying out the household survey. The surveys would need to be regularly conducted in different parts of the country on a comparable basis in order to collect reliable information and assess at the national level the
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progress made towards the targets. The same process would contribute in time to the modification and refinement of the national targets. There would, of course, still be a need to adjust the national targets for local variations.

Initially, measures to attain the targets would need to be general, and directed towards the average household within the target poverty group, with little attention to those that are not average; but once progress has been made towards dealing with the general problems of the broad majority, more effort could be devoted to the varying needs of the others. Thus the circle of concern would be widened and made more specific over the years. This strategy would mean that the programme had some effect on a large number of people from the very beginning, thus making good use of resources.

Local planning

It will already be clear that the minimum income strategy would involve a shift of emphasis in planning and administration to the local level, i.e. to the district, or just possibly to the division. To operate at the location level would tie up too many scarce resources and, in any case, would miss too many of the relevant interconnections. On the other hand, planning at a level higher than the district would be so general as to be devoid of the specific advantages of local planning.

The Ndewga Commission\(^1\) has already recommended the creation of the post of district development officer, under the general authority of the district commissioner, with specific responsibilities for preparing and monitoring progress under the development plan, as well as co-ordinating with the district development committee.

This is a step in the right direction, but must be supported by full participation of local groups on the district development committee (and its sub-committees) and elsewhere. In our view, the Ndewga Commission may not have gone far enough in envisaging the wide range of representation needed in district planning. We would think it desirable to include such people as progressive farmers, leaders of self-help projects, schoolteachers, leaders of women's groups and local branch officers of the voluntary youth organisations. In certain places larger employers and trade unionists should also be included. It would be equally important to include some representatives with specialised knowledge of and direct concern for persons in the poverty target groups. Wherever possible, it would be useful to include some members of those groups directly on the committee.

In choosing members of the committee, a balance should be struck between the more progressive persons and others representing more traditional

\(^1\) The Public Service Structure and Remuneration Commission.
ideas. Because of the importance of youth employment problems, it would be useful if at least a certain proportion—for example 10 or 20 per cent—of the committee were under 25 years old. Another group, amounting for example to between 15 and 25 per cent, should be composed of women.

Experience with local planning in Kenya has already revealed the dangers of striving for a level of co-ordination which might appear logically necessary on paper but which never works in practice. More important than formal co-ordination are flexible procedures which allow for quick adjustments as problems appear. An over-emphasis on time-consuming planning and excessive data collection at the early stages frequently leads to failure. Procedures should be developed gradually and experimentally; they should be simple at first but open to adjustment for greater complexity as experience accumulates. The lessons of experience play an important part in suggesting how planning towards the minimum income targets should proceed—experimentally and simply at first, and later becoming complex. The lessons of the Special Rural Development Programme are particularly relevant in this respect.

Initially, the particular responsibilities of local planning agencies in Kenya could include the following:

1. To identify the local projects and programmes needed to attain the minimum income targets as discussed above, i.e. to translate national planning into specific action on the ground.

2. To work towards the correction of extreme imbalances and inequalities within the district.

3. To identify potential growth points that are or could become foci for development, particularly for informal-sector activities. Those growth points may need the reinforcement of new specialised facilities provided for in the national plan.

4. To integrate into coherent programmes the various agricultural, industrial, health, transport, educational and training projects in the district programme so that the individual components all reinforce one another.

The last objective deserves careful attention, since it is through the application of this concept that development planning can regain the unity it has sometimes lost through sector-by-sector or ministry-by-ministry programmes. For a particular district it will be important not only to deal with the direct measures concerning land improvement, credit, irrigation, the local road system and cropping patterns, but also to incorporate, for example, training and literacy programmes to provide relevant skills and knowledge, and health and nutrition components for the adults as well as for children. All the district specialist staff should be drawn upon, together with the skills, expertise and leadership of persons in the informal sector.
Implications for central planning

The difficulties of shifting the emphasis from Nairobi to the local level, from the centre to the periphery, should not be underestimated. Earlier chapters have made clear the strength of the forces and mechanisms of centralisation in Kenya as in other countries. Many of these mechanisms are now deeply rooted in the structure and procedures of government. To overcome these tendencies will require new policies, great determination and detailed attention to implementation. Earlier chapters have already proposed a number of specific measures that would help to institutionalise a shift in emphasis to the district level, and to the poorer locations within districts.

The shift in emphasis to the local level does not of course mean that the central administration will be bereft of its essential functions. Many of the obvious functions of central planning and policy making will remain. Indeed, some existing functions will assume much greater importance, particularly those related to the diminution of original imbalances and to support for planning at the local level. The more conscious use of government revenue and expenditure as an instrument of redistribution from the centre to the periphery and from the richer areas to the poorer requires strong commitment and administration at the centre.

There is another factor that is related to administrative organisation and procedures. The use of minimum quotas on the lines indicated at various places in the report—for levels of government expenditure by district, for civil service recruitment, for rates of progression to secondary school, for land settlement—would, if well designed and seriously implemented, set a frame which would ensure at least minimum allocations to the poorest groups.

The implications of the minimum income targets—together with associated components in living standards—for the economy as a whole need to be considered in assessing the over-all balance of the whole development plan. The total effect of all projects and programmes on the income levels and living standards of the poorest groups needs to be explicitly estimated, district by district (and for whatever other areas or categories seem appropriate). If the total effect of all projects and programmes is inadequate in one area (in relation to others), that is a sign that the plan is out of balance, and appropriate changes should be made.

This process cannot take place solely, or even mainly, at the centre, but must be carried out in direct discussion with the district planning committees. The timetable for preparing future development plans should therefore allow ample time for such discussion. Extra support will be needed at the district level, with some of the more senior personnel (from operating ministries as well as from the Ministry of Finance and Planning) spending a good deal of
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time in the field, particularly in the poorer districts. Otherwise district development plans will be inadequate and will not lead to the fundamental shift that is required.

In short, there is a need for greater decentralisation in procedures and in implementation, with supporting changes in central organisation. It may be useful to mention some of the many ways in which decentralisation is required and would help:

(1) Decentralisation of a number of procedures is needed to make possible a quicker response when problems of implementation arise.

(2) Decentralisation is needed to make possible integration of the programmes of different ministries at the level that matters. Implementation of our proposals to eliminate most of the graduated personal tax and free the local administration from tax collecting would provide the capacity for improved local co-ordination. Such an improvement, however, will require not merely a change in responsibilities but—more difficult—a change in attitudes. The suspicion between the provincial administration and the operating ministries has a long history in Kenya and still persists in some fields.¹

(3) Decentralisation is needed to make possible the fuller exploitation of local resources, particularly labour surpluses at certain times of the year. If local variations in the dates of school terms were allowed, a more flexible time-table could be introduced for pupils in lower secondary schools (i.e., aged about 13 to 15) in order to free them at times of labour scarcity. The slack and peak seasons occur at different times of the year in different parts of the country. Decentralisation would make possible local adjustment to those variations.

(4) Social customs and economic activities also vary throughout the country. In our report we have stressed the excessive burdens often placed on women at present and the need for reconsidering their role. Such reconsideration is obviously a delicate process, which must be matched to changing circumstances in different places. Again, decentralisation would make such matching possible.

Decentralisation in implementation will depend considerably on giving local authority the power to make financial decisions, at least within limits. In many areas, one hears accounts of delays in obtaining financial authorisation or reaching decisions on matters which have to be referred to Nairobi. Some of this is unavoidable, but much would be avoided if district planning committees were authorised to make final decisions within specified limits on the allocation of development funds. An allocation of, for example, £40,000 per

¹ See the Ndegwa Commission report, op. cit., Chapter 12, on this point.
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district per year for use as specified by the local committees would greatly increase the flexibility and responsiveness of local planning, as well as make possible better utilisation of other local resources.

Popular response

As mentioned in many passages of this report, the Harambee movement is not merely a remarkable social phenomenon but a precious asset of enormous potential for further development. Clearly there are many Kenyans throughout the country who are willing to respond with effort and resources if given a lead; but again, a balance must be struck between response to local efforts and co-ordination to ensure that those efforts fit in with an orderly programme of national development. Greater representation of a wider group of local interests in the planning process would help. So also would the physical transfer of more planning responsibility to the local level. The more planning procedures can be made intelligible at the local level, the more local leaders will be able to explain priorities to government officials and explain national priorities and constraints to the local people.

Ordinary people and local representatives have a great deal to contribute to planning at the local level, but if their contribution is to be fully effective they will need a better grasp of the basic financial and economic issues involved than most of them possess at the moment. They will also need an understanding of some of the underlying technical arguments related to development in their areas, as well as in the national economy as a whole.

Some of this knowledge will be picked up simply by taking part in the work of the committees, but other things are best learnt through brief and specific training courses. Some courses on these lines could well be organised in the district or farmer training centres, and others nationally. Less formal ways of training would also be useful—the chance to observe another district development committee at work, visits to other parts of the country, and the purposeful selection of a relevant visit among the many opportunities for study or study-travel abroad, particularly to other African countries. Too often it is the people from Nairobi or provincial headquarters who are selected for tours abroad, and too often those study tours take people to developed countries, where much of what is seen is only of very limited relevance. (Even opportunities of stopovers in a developing country en route are missed.)

All this would help to provide people with planning expertise and competence at the local level. New skills as well as new attitudes are also needed among planners and administrators at the centre, and local training could be useful for them too. It would be advantageous if persons from both the central and the local administration attended many of the same courses.
A government has only limited resources, and it is clearly not possible for it to be active in every field; but even in fields where the Government itself is not active, it should take full account of the people's activities and response. Sometimes the response will be adequate and there will be no need for government action; but at other times, the response will be inadequate and a positive policy must be devised.
In our report we have made a number of far-reaching suggestions. Far-reaching changes in many sectors of the economy seemed to us to be urgently required if the aims that formed the subject of our brief—the creation of a Kenya where there would be much more widespread chances of earning a reasonable living—were to be rapidly achieved. Sometimes we wondered whether it was proper for an international mission to presume to make such recommendations, but we were encouraged by the expressed wish of the Government that we should not shrink from bold and radical approaches. Moreover, we believe that our recommendations remain within the framework of the essential principles governing Kenya's society and economy, a mixed economy conforming to the pragmatic guidelines of Sessional Paper No. 10 of 1965. Finally, we did not hesitate to make our recommendations because we realise that in any case it will be for the Government and Parliament of Kenya to decide whether our recommendations are found acceptable or not. This applies both to the broad sweep of re-orientation intrinsic to our recommendations as a whole and to each one taken individually.

In considering our proposals, it is important not to lose sight of this broad sweep of re-orientation. The details of the policies can be varied—and in some cases there are major alternatives within the policies themselves. But in one way or another, certain new directions must be established if the problems identified earlier in the report are to be solved.

These new directions, outlined in the preceding chapters, can be summarised as follows:

1. Kenya's population policy, a pioneering policy in its time, must, over the coming years, be implemented much more effectively and on an increasing scale.

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(2) Technological policy must be approached in a multitude of ways, being concerned with what is produced as well as how it is produced, and covering the more selective importation of technology as well as stimulating, wherever appropriate, the development of indigenous technology.

(3) There must be a major shift in agricultural policy in favour of the small farmer, through a whole range of extension, research, credit, input, pricing and marketing policies, as well as through land and land-tax policies designed to encourage further subdivision of large holdings.

(4) Integrated rural development should be stimulated through a wide range of rural works and activities which would improve rural incomes, amenities and living standards and reduce the risks of periodic famine and loss. Local planning, which is already being initiated, will need much greater resources and support in order to implement the minimum income approach and make integrated rural development a reality.

(5) Industrialisation should press ahead, but with a more selective approach to foreign investment and large-scale production and more support for small-scale, regionally dispersed local industry, and of industries exporting processed agricultural products.

(6) A radical change in local and central government policy towards the informal sector is required, with legal restrictions being replaced by a positive approach in which the initiative and dynamism of the informal sector is encouraged to develop freely.

(7) Fundamental reform of the educational system must be set in motion, breaking the negative backwash effects of the existing examination system and moving towards a system in which repetition and differential enrolment between districts are replaced by a period of universal basic education for all children, followed by opportunities for relevant training which avoid sharp divisions between school and training and training and work.

(8) Major inequalities in access to land, education and employment—which underly a great deal of today’s frustration among school leavers and job-seekers—must be sharply reduced, in part by the provisional use of quotas to ensure fairer treatment between men and women, between persons of different tribal and ethnic backgrounds, and between different districts.

(9) An incomes policy covering wages and other incomes along the lines specified in the Development Plan, but effectively implemented, is essential.

(10) A major re-structuring of government revenue and expenditures is required in favour of the rural areas, the more backward districts and the lower income groups.
The cost of inaction

(11) Kenya's international policies towards aid, trade and foreign investment need to be more selective, to reduce dependence and ensure greater alignment of activities in each of these areas with Kenya's national interests.

We realise that in many cases action along these lines may be difficult—politically, administratively, financially and psychologically. It may represent a break with familiar traditions and offend or hurt sectional interests. But when the cost of action is weighed we plead that the cost of inaction be also considered. The problem that the Government of Kenya considered serious enough for our advice to be sought on it is the result of past history, and of past conditions and policies. If they are not changed there must be a presumption that the problem will remain, that it will in fact continue to grow. There are transitional problems, especially in developing countries, which can be expected to right themselves in due course; but problems of lack of employment and maldistribution of income-earning opportunities are not among them. Moreover, the cost of dealing with problems may be much higher once they pass the threshold of what is considered tolerable, since the opportunities of dealing with them by rational and consistent methods and by national consensus may be greatly lessened.

When we try to assess the consequence of inaction in more concrete terms, there is a danger of apocalyptic exaggerations. We have been asked to deal with one of the deficiencies in Kenya's economic growth and development. There is a danger that a group of people who concentrate on the problem of that particular deficiency may forget about growth and development. In our report, we had to concentrate on the aspects of Kenya's structure in respect of which we believe changes to be necessary. This is the place to remind ourselves that our view is partial. Kenya has an enviable record in terms of over-all growth, as in a number of other respects. Signs of progress abound. Indeed, many of our suggestions would be unthinkable had we not considered that Kenya's past achievements provided the basis and the means for achieving them. We do believe, however, that without such action as we suggest the particular problems with which we have been dealing will not disappear. And nobody can say that these problems are merely like the mild toothache of an otherwise healthy person: they are more like the broken leg of an otherwise vigorous person, which prevents him from exercising his strength until the matter is put right.

In the past, Kenya has been assisted by a number of factors which have given impetus to its progress and provided a breathing space for dealing with problems or temporary solutions which made it safe to defer more fundamental policies. The achievement of independence was the major event from which much of this impetus and many opportunities have flowed. The settlement of the Scheduled Areas, the abolition of many restrictions on the African small-
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holder and producer, Kenyanisation, which opened many new avenues in the higher ranges of economic opportunities, the East African Community, the emergence of Nairobi as the metropolis of East Africa, the strong and harmonious international relations of Kenya, the flood of tourists attracted by the great beauty of the country, the vigorous self-help movement, the burning desire for education and training, the inflow of foreign investment and aid... again and again these have released forces which provided new outlets and opportunities—enough to keep the troubling problem of imbalance and insufficiency of productive employment within manageable proportions.

No doubt the future will bring to light new sources of strength of this kind, although some of those enumerated above cannot be relied upon for the future. There are still chances of settlement, and indeed some of our proposals are based on this; there are the existing although uncertain prospects of pushing the land frontier out into the vast expanse of drier land still available; there is still scope for Kenyanisation; the East African Community may be revitalised or expanded and new methods of African and world co-operation may develop; mineral resources may be found; new technologies may emerge (even without action of the kind we suggest), the balance of payments may again turn in Kenya's favour, and so forth. These things may, and some of them no doubt will, happen and provide new opportunities and even partial relief of unemployment and poverty. Above all, as long as underlying economic growth continues, the scope for dealing with some aspects of the unemployment problem by the financing of relief or by redistribution of incomes after they are earned will constantly improve and widen.

But when all this is said, we can and must nevertheless state, without distorting the over-all perspective, that the danger of inaction is great. The population increases relentlessly, and if there are no results from the family planning policy which we have recommended, Kenya may have to support a population of 30 or 40 million people by the year 2000, on what may still be a small area of high-potential land concentrated along a narrow axis in a small part of the country. The balance of payments may set serious limits to continued economic growth in the present framework, and increase international dependence at a time when the forces of international co-operation may be even weaker, or at any rate no stronger, than now. It would be better to create a less dependent economy now (our recommendation would move the country in that direction) than to have to take ad hoc or crisis measures in the future. The frustration of younger people in search of opportunities—frustration instilled by their present preparation for life—may lead to alienation and intolerable tensions. In this, as in many other fields in which we make recommendations, it is necessary to take the first steps towards a new structure now, in order to be able to cope with problems that may be 10 or 20 years distant.
If Kenyanisation is to be a full reality in industry in 10 or 20 years, the restructuring of industry and technology as well as training and selection must start today. Once a structure of demand and production has been created which is incompatible with fuller employment, it becomes progressively more difficult and expensive to reverse it later: it is far better to take early action to create a different structure. An ossified structure may create a situation in which any interference will only aggravate unemployment in the short run (and possibly beyond the limits of what is tolerable) while the structure itself prevents the implementation of the policies required for full and widespread employment. Thus the problem may become insoluble in future, whereas it can still be avoided by timely action.
SCOPE AND NATURE OF THE PROBLEM
1. ESTIMATION OF AFRICAN RURAL INCOMES AND DISTRIBUTION OF AGRICULTURAL LAND

This technical paper summarises the methodology and sources of data used for some of the tables in Chapter 1. It also provides additional information on the distribution of agricultural land in certain districts.

A first approximate estimate of African rural incomes in 1969, given below, suggests a total of £231 million, i.e. about £134 per household or £24 per head. What may perhaps be surprising is that as much as 40 per cent of this income apparently derives from sources other than agriculture as such.

1. Gross domestic product at factor cost outside the monetary economy:
   - Agriculture £89.0
   - Other items £26.1

2. Contribution of small-scale agriculture to the gross domestic product in the monetary sector at factor cost:
   - Accruing to owners £20.7
   - Accruing to hired workers £9.1

3. Estimate of contribution of African-owned part of large-scale agricultural sector to the gross domestic product in the monetary sector, at factor cost (net of workers’ earnings) £8.7

4. African agricultural wages in the modern1 agricultural sector £10.6

5. Assumed remittances from the urban sector (20 per cent of the remainder of the African wage bill) £18.3

6. Contribution of small-scale rural non-agricultural enterprises to gross domestic product in the monetary sector:
   - Accruing to owners £13.6
   - Accruing to hired workers £4.6

7. Earnings from wage employment in rural non-agricultural industries in the modern sector £30.7

Total £231.4

(Sources overleaf)

1 "Modern" is the term used in the official statistics. "Modern" agriculture roughly corresponds to what we call the "formal" sector of agriculture.
Employment, incomes and equality

Sources for individual items: 1. Economic survey, 1971, table 1.1. 2. Ndegwa Commission report Statistical abstract, 1971, table 215. 3. Figure obtained by subtracting the contribution of small-scale agriculture from the total contribution of agriculture to gross domestic product at factor cost, deducting African agricultural wages in the modern sector and assuming (conjecturally) that 40 per cent of the remainder represented the contribution of African-owned farms, i.e. (62.05 − 29.83 − 10.6) 0.4 = 8.65. 4. Statistical abstract, 1970, table 188 (b). 5. Statistical abstract, 1970, table 188 (b). The average level of remittances reported in the Nairobi urban study is 20 per cent (see G. E. Johnson and W. E. Whitelaw: Urban-rural income transfers in Kenya: An estimated remittances function, op. cit. 6. Survey of non-agricultural rural enterprises, 1969, op. cit. 7. Annual enumeration of employees, op. cit.

Looking at the individual items, the non-monetary sector makes by far the largest single contribution, and accounts for 50 per cent of total African rural incomes in 1969. Growth in the gross domestic product at factor cost outside the monetary economy is estimated at 4.1 per cent at constant 1964 prices in the period 1964-70, while the agricultural component of this has been growing at only 3.9 per cent over the same period.

It is difficult to comment on these growth rates in isolation, because as the economy becomes increasingly monetised a transfer from non-monetary to monetary production is to be expected.

Thus, while the contribution of small-scale agriculture to the gross domestic product in the monetary sector accounts for only a small portion of total rural income (13 per cent in 1969), it experienced an average growth rate of 7.1 per cent per annum over the period 1964-69. The future rate of growth of small-scale agriculture depends to a large extent on the growth of demand from the urban sector for agricultural products, the monetisation of the rural sector, the growth potential of export crops and the fate of large-scale agriculture.

In considering small-scale agriculture, it is important to note that payments to hired labour already account for almost one-third of the contribution of this sector to gross domestic product. One gains the impression, especially when studying the growth of the smallholder tea industry, that there is a marked propensity for farmers to hire workers as the cash intensity of their holdings increases, and thus that the hired workers’ share of the value added by small-scale cash agriculture is likely to increase in the future.

This also has important implications for income distribution, since the hired workers tend to be poorer people with small or badly farmed plots, or the landless, whereas in the past, cash farming has tended to be concentrated on the richer or larger farms.

It is very difficult to estimate the exact African rural share of the large-scale farming sector. At the moment this consists mainly of a proportion of the mixed farms and ranches, rather than the estates. One indicator of its likely importance is that African farmers produced 44 per cent of the Kenya wheat crop in 1969. The future of this sector’s contribution to rural incomes depends on improved efficiency within the existing structure, increased rural African ownership of the large holdings and the extent of subdivision of the existing large farms into small holdings.

1 Economic survey, 1971, table 1.2.
### Table 49. Distribution of agricultural land by size of holdings in certain districts, 1969-70 (Percentages)

<table>
<thead>
<tr>
<th>District</th>
<th>&lt; 1 hectare</th>
<th></th>
<th>&lt; 2 hectares</th>
<th></th>
<th>&lt; 5 hectares</th>
<th></th>
<th>&lt; 10 hectares</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Holdings</td>
<td>Land</td>
<td>Holdings</td>
<td>Land</td>
<td>Holdings</td>
<td>Land</td>
<td>Holdings</td>
<td>Land</td>
</tr>
<tr>
<td>Kiambu</td>
<td>33.8</td>
<td>3.5</td>
<td>57.0</td>
<td>10.9</td>
<td>90.8</td>
<td>33.2</td>
<td>97.9</td>
<td>43.8</td>
</tr>
<tr>
<td>Muranga</td>
<td>46.5</td>
<td>13.4</td>
<td>78.4</td>
<td>37.6</td>
<td>96.8</td>
<td>66.3</td>
<td>99.3</td>
<td>75.4</td>
</tr>
<tr>
<td>Nyeri</td>
<td>35.9</td>
<td>6.3</td>
<td>68.6</td>
<td>21.3</td>
<td>95.6</td>
<td>45.4</td>
<td>99.2</td>
<td>52.7</td>
</tr>
<tr>
<td>Siaya</td>
<td>38.2</td>
<td>5.6</td>
<td>62.2</td>
<td>14.9</td>
<td>84.0</td>
<td>33.6</td>
<td>92.4</td>
<td>49.7</td>
</tr>
<tr>
<td>Kisii</td>
<td>26.6</td>
<td>6.6</td>
<td>56.0</td>
<td>23.4</td>
<td>89.8</td>
<td>63.0</td>
<td>97.8</td>
<td>84.2</td>
</tr>
<tr>
<td>South Nyanza</td>
<td>14.9</td>
<td>1.2</td>
<td>30.6</td>
<td>4.6</td>
<td>58.1</td>
<td>18.3</td>
<td>75.0</td>
<td>37.4</td>
</tr>
<tr>
<td>Kakamega</td>
<td>26.7</td>
<td>6.4</td>
<td>55.1</td>
<td>22.0</td>
<td>87.1</td>
<td>60.2</td>
<td>98.2</td>
<td>90.7</td>
</tr>
<tr>
<td>Bungoma</td>
<td>3.1</td>
<td>0.4</td>
<td>14.3</td>
<td>3.5</td>
<td>53.6</td>
<td>26.5</td>
<td>88.0</td>
<td>69.6</td>
</tr>
<tr>
<td>Busia</td>
<td>16.6</td>
<td>1.2</td>
<td>28.6</td>
<td>4.5</td>
<td>55.7</td>
<td>20.1</td>
<td>85.9</td>
<td>57.4</td>
</tr>
<tr>
<td>Kericho</td>
<td>6.7</td>
<td>0.6</td>
<td>26.6</td>
<td>4.8</td>
<td>67.3</td>
<td>23.3</td>
<td>87.6</td>
<td>44.1</td>
</tr>
<tr>
<td>Nandi</td>
<td>4.4</td>
<td>0.3</td>
<td>16.6</td>
<td>2.0</td>
<td>52.1</td>
<td>15.6</td>
<td>85.8</td>
<td>42.7</td>
</tr>
</tbody>
</table>


The contribution of agricultural wages from the modern sector is still slightly more important than that from the small-scale sector. However, the agricultural wage bill for the modern sector has shown virtually no growth over the last decade, whereas it is likely that the wage bill for small-scale agriculture has been growing faster than the 7 per cent rate of growth of the contribution of small-scale agriculture to the gross domestic product.

However, with the estates now showing an increased demand for labour, particularly for tea plucking, and given their current problems in recruiting additional labour, some increase in the wage bill for the modern sector is likely in the future.

If remittances from urban workers to the rural sector account for 20 per cent of the African non-agricultural wage bill, then they constitute 8 per cent of total rural income. Some people would argue that this is an underestimate, partly because some surveys suggest that the average level of remittances is higher and partly because this calculation ignores remittances from the self-employed or the "informally employed". Even so, as the African wage bill in the modern sector (excluding agriculture) grew at the rate of about 15 per cent per annum over the period 1964-69, remittances constitute the fastest growing item in total rural incomes.

Because of the significance of the urban wage bill for rural incomes, in terms both of remittances and of urban demand for agricultural products, it is most important to evaluate the effect of any proposed urban wages policy on the rural sector.

The 1969 survey of non-agricultural rural enterprises revealed that such enterprises contribute about 8 per cent of rural incomes. In the absence of any previous survey, it is difficult to estimate the rate of growth of this sector.

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However, in general terms, one might expect its growth to be related to the overall rate of growth of rural cash incomes, unless there are opportunities for a rapid expansion in rural-based industries serving the urban sector.

Finally, the annual enumeration of employees shows that earnings amounting to £30.7 million accrue to modern-sector non-agricultural enterprises located in rural areas. Unfortunately, it has proved impossible to net out the non-African component of this item, and so this probably represents a slight over-estimate of the actual contribution of this source of employment to African rural incomes.

Table 49 gives further information on the distribution of agricultural land by size of holding in certain districts of Kenya—mainly those where land registration has been completed.
2. INTER-DISTRICT VARIATION IN CROP DIVERSITY
AND SEASONAL VARIATION IN THE USE OF LABOUR
IN SMALL-SCALE AGRICULTURE

Table 50 constitutes an attempt to illustrate some of the disparities between
districts as regards agricultural development. Four columns for each district
show the extent to which improved maize (chiefly hybrid and Katumani) has
been adopted, the percentage of cultivated area under cereals grown mainly
for subsistence, and the importance of cash cropping, under alternative defini-
tions of cash crops.

The extent to which hybrid maize has been adopted shows a marked geo-
 graphical dispersion round the innovation centre of Kitale and underlines the
need for the field trials and research sub-stations that the Ministry of Agriculture
is about to set up in areas like the Central Province, where the adoption of
hybrid maize lags.

The proportion of cultivated area under food cereals is very high in all
districts, even when allowance is made for some exaggeration in the percentages
owing to interplanting. This underlines the fact that small-scale agriculture in
Kenya is still very largely subsistence agriculture, and that there is a possibility
of freeing land and labour by adopting new technologies for food production.
Certain districts stand out as having a relatively small area under food crops:
these are the districts that are generally recognised as being progressive, such
as Kiambu, Meru, Nyeri and Taita. Nyandarua is exceptional because there
the farms were inherited, mainly under settlement, as going cash-crop concerns.

The districts that have a relatively small proportion of cultivated land under
food crops are the ones that show up well in the third and fourth columns. However, the main interest of those columns lies in the fact that they enable
one to identify the districts that lag behind in the introduction of cash crops
and crop diversity. Districts that do poorly, under both definitions of cash
crops, are Busia, Siaya and South Nyanza. Districts with a surprisingly high
proportion of land under cash crops are those in the Coastal Province: Kwale,
Kilifi and Taita. Kitui and Machakos come out less well when legumes are
dropped from the cash crop list, as do Nandi, Kakamega and Bungoma when
hybrid maize is excluded.

Table 51, showing figures for monthly labour inputs, was calculated by
applying labour-land coefficients computed from the farm enterprise cost survey
for 1969 and 1970-71 to the crop areas for each district given in the Statistical
### Table 50. Inter-district variation in crop diversity, 1969-70

<table>
<thead>
<tr>
<th>Province and district</th>
<th>Area under improved maize as percentage of total area under maize</th>
<th>Cereals area as percentage of total cultivated area</th>
<th>Area under cash crops as percentage of cultivated area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Definition A *</td>
<td>Definition B *</td>
<td></td>
</tr>
</tbody>
</table>

**Rift Valley:**
- Kericho: 31 88 41 16
- Nandi: 61 91 69 8
- East Marakwet: 43 79 60 23

**Central:**
- Nyeri: 9 58 57 37
- Muranga: 2 83 40 18
- Nyandarua: 11 40 108 4 86
- Kiambu: 2 60 56 41
- Kirinyaga: 6 76 42 23

**Nyanza:**
- Kisumu: 2 98 54 21
- Kisii: 45 78 68 31
- South Nyanza: 2 98 26 20
- Siaya: 12 128 4 26 9

**Western:**
- Kakamega: 54 88 61 13
- Bungoma: 64 86 64 13
- Busia: 10 96 27 20

**Coast:**
- Kilifi: — 84 73 66
- Kwale: 40 87 71 42
- Taita: — 8 67 75 66

**Eastern:**
- Embu: 11 87 35 7
- Meru: 5 67 55 35
- Kitui: 8 101 4 63 16
- Machakos: 2 77 57 24

* Excluding wheat. Includes as cash crops: improved maize, wheat, all pulses other than beans, all temporary industrial crops (including cotton, sugar cane, pyrethrum, groundnuts and oil seeds), English potatoes, cabbages, certain other vegetables and other temporary crops, and all permanent crops (including coffee, tea, coconuts, cashew nuts, pawpaws, bananas and other fruit). Includes as cash crops: wheat, all temporary industrial crops, English potatoes, cabbages, certain other vegetables, coffee, tea, coconuts and cashew nuts. Cereals area or cash crop area can exceed cultivated area because of double cropping or because crops grown in mixtures are double-counted. * Less than 0.5 per cent but not zero.

Source: *Statistical abstract, 1971, table 82.*

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*abstract, 1971.* This is the basis used for table 8 in Chapter 1. Labour allocated to livestock enterprises is not included, but since labour use in these activities is fairly constant through the year, the omission has little effect on the over-all shape of the labour profile. The exclusion of these enterprises may influence the magnitude of the coefficients of variation, but it probably does not affect their
Table 51. Monthly aggregate crop labour profiles for certain districts, in order of increasing variation in monthly labour input, 1969-71  
(Thousands of man-days)

<table>
<thead>
<tr>
<th>Month</th>
<th>Kiambu</th>
<th>Nyeri</th>
<th>Kisii</th>
<th>Bungoma</th>
<th>S. Nyanza</th>
<th>Siaya</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>697</td>
<td>1674</td>
<td>3347</td>
<td>2112</td>
<td>4592</td>
<td>4566</td>
</tr>
<tr>
<td>May</td>
<td>633</td>
<td>1304</td>
<td>3221</td>
<td>2316</td>
<td>3891</td>
<td>3307</td>
</tr>
<tr>
<td>June</td>
<td>802</td>
<td>1281</td>
<td>2977</td>
<td>1907</td>
<td>3473</td>
<td>1054</td>
</tr>
<tr>
<td>July</td>
<td>733</td>
<td>1149</td>
<td>2522</td>
<td>1241</td>
<td>3565</td>
<td>1283</td>
</tr>
<tr>
<td>August</td>
<td>753</td>
<td>1127</td>
<td>2486</td>
<td>1080</td>
<td>3792</td>
<td>996</td>
</tr>
<tr>
<td>September</td>
<td>713</td>
<td>1178</td>
<td>2474</td>
<td>1557</td>
<td>3347</td>
<td>1136</td>
</tr>
<tr>
<td>October</td>
<td>703</td>
<td>1169</td>
<td>2559</td>
<td>1420</td>
<td>2506</td>
<td>935</td>
</tr>
<tr>
<td>November</td>
<td>635</td>
<td>990</td>
<td>2367</td>
<td>904</td>
<td>1536</td>
<td>212</td>
</tr>
<tr>
<td>December</td>
<td>650</td>
<td>1055</td>
<td>2371</td>
<td>816</td>
<td>1160</td>
<td>144</td>
</tr>
<tr>
<td>January</td>
<td>687</td>
<td>960</td>
<td>2218</td>
<td>612</td>
<td>1024</td>
<td>301</td>
</tr>
<tr>
<td>February</td>
<td>525</td>
<td>1069</td>
<td>1530</td>
<td>575</td>
<td>1333</td>
<td>136</td>
</tr>
<tr>
<td>March</td>
<td>641</td>
<td>1208</td>
<td>1652</td>
<td>633</td>
<td>1290</td>
<td>791</td>
</tr>
</tbody>
</table>

Coefficient of variation in monthly labour input

|            | 10.4 | 15.9 | 21.9 | 47.8 | 49.1 | 109.1 |


ordering. With larger farms and flat land much of the seasonal variation of labour demand associated with maize is reduced by mechanisation. This seems to be the case for Kiambu, which has a well diversified, progressive agriculture, but much lower labour inputs for maize than Kisii.
3. ESTIMATION OF EMPLOYMENT IN THE INFORMAL SECTOR IN URBAN AREAS

There are no data on employment in the informal sector in urban areas in Kenya. Because of the importance which the mission attached to the informal sector, we feel it desirable to make some estimation of its size in urban areas. A direct estimation (as opposed to estimation by the residual method) is also useful as an independent check on unemployment figures. This paper describes the methodology used in two recent estimates of the number of persons employed in the informal sector in the urban areas: that contained in a recent unpublished World Bank report and that contained in one of the working papers for our mission. The two results are compared here, with comments on the strengths and weaknesses of each. As we indicated in Chapter 3, the evidence is too shaky for much reliance to be put on either of the estimates. They are quoted here to illustrate methodologies with which better data could be followed up later, and to indicate very broadly what seem to be reasonable orders of magnitude for urban employment in the informal sector in 1969.

The World Bank report tries to estimate employment in the informal sector (though it does not use the term) in Nairobi. It arrives at a labour force figure for 1969 by assuming an adult participation rate of 95 per cent for males, and 45 per cent for females, between 15 and 59. From the Mathare Valley study it takes the survey result that one-third of squatters were self-employed. It assumes that this proportion applies to all squatter areas. In addition, it assumes that 10 per cent of the non-squatter labour force is self-employed. The latter figure is based on the assumption that there is less scope for self-employment outside squatter areas than within them. On the assumption that one-third of Nairobi’s population was living in squatter areas, it arrives at a figure for self-employment. It then assumes that the ratio of self-employment to wage employment in urban small business is the same as for surveyed non-agricultural activities in rural areas. This results in an estimate of 16,000 self-employed persons and 13,000 employees. As will be seen, this result is not very different from that at which we arrive by an entirely different method.

The World Bank report also applied the same method to Mombasa, arriving at an employment estimate of 13,000. This is certainly too low, for it implies a

1 Mathare Valley, op. cit.
Employment, incomes and equality

rate of unemployment over twice the official survey result.\(^1\) As pointed out in
Chapter 12, on services, we have compelling evidence that the scope for informal-sector activities is greater in Mombasa than in Nairobi. In our judgment
it is not possible to make a direct estimate of informal-sector employment for
any town other than Nairobi.

Our method also makes use of the squatter settlement surveys of Nairobi
and the survey of non-agricultural rural enterprises. While, as we have said, the
result is similar to the one arrived at in the report of the World Bank, the
similarity is accidental. The estimate in the World Bank report is based on
the total population of Nairobi, whereas our estimate is based on the Kenyan
African population, which in 1969 was 407,736, or over 100,000 less than the
total population.\(^2\) Since the estimate is based on the squatter population and
informal-sector employment, both of which are almost exclusively African, it
seems more reasonable to us to use the figure of 407,736. The estimation that
follows attempts to account for the Kenyan African population. This refers to
178,000 adult males and 83,700 adult females in 1969.

The sources of the main enumerated figures in table 52 are given below the
table. Here we restrict ourselves to explaining the figures for the informal sector.
The estimate is based on the number of commercial establishments in squatter
areas of Nairobi. From the data presented in a 1969 survey\(^3\), the number of
establishments per thousand persons was calculated for five categories of enter-
prises (general store, café or hotel, other retail, artisan, and “other”). Employ-
ment per establishment by category of enterprise was calculated from the survey
of non-agricultural rural enterprises. The products of these gave employment per
thousand of population (self-employment, family and wage workers) for the
five categories. The figure for each category of enterprise was then multiplied
by the squatter population in thousands. Addition then gave the figure of 14,300
for squatter areas. The division between males and females was assumed to be
the same as that in rural areas given by the survey of rural non-agricultural
enterprises.

Informal-sector employment among people living outside squatter areas
requires even more arbitrary assumptions to estimate. Our procedure was to
assume that informal-sector employment per thousand of population outside
squatter settlements was 75 per cent of that within squatter settlements in 1969.
This cannot be verified, but we believe that it is closer to being correct than
the Bank’s lower estimate (33 per cent). There is no compelling reason to think
that the scope for informal-sector activities is less outside squatter settlements
than within. To the extent that 75 per cent is too high, overestimation is almost
certainly compensated for by the under-enumeration of the smallest size of
establishments covered by official enumerations of employees. Finally, our esti-
mation of the informal sector is completed by a figure for transport, incorpor-
ating illegal taxi operators (see Chapter 12).

These estimates make no pretensions to accuracy, but we feel, given the
available data, that this is a reasonable way to estimate informal-sector employ-
ment. The residual figure for males compares well with the unemployment

\(^1\) *Urban household budget survey, 1968-69*, op. cit.


\(^3\) *Mathare Valley*, op. cit.
Table 52. Nairobi employment estimate, 1969
(Thousands)

<table>
<thead>
<tr>
<th>Employment or activity</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. African adult population over 14</td>
<td>178.8</td>
<td>83.7</td>
</tr>
<tr>
<td>B. Accounted for:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary school pupils</td>
<td>16.5</td>
<td>6.4</td>
</tr>
<tr>
<td>University and college students</td>
<td>1.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Wage employment in the formal sector</td>
<td>115.6</td>
<td>18.5</td>
</tr>
<tr>
<td>Self-employment in the formal sector</td>
<td>3.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Informal sector:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>squatter settlements</td>
<td>11.7</td>
<td>2.6</td>
</tr>
<tr>
<td>non-squatter</td>
<td>12.7</td>
<td>2.8</td>
</tr>
<tr>
<td>transport</td>
<td>2.0</td>
<td>—</td>
</tr>
<tr>
<td>C. Unaccounted for</td>
<td>15.5</td>
<td>52.5</td>
</tr>
<tr>
<td>D. Line C as a percentage of line A</td>
<td>9.2</td>
<td>62.7</td>
</tr>
</tbody>
</table>


estimates in Chapter 3. The residual figure for females is, of course, much too large. Quite apart from the housewife category, the residual figure includes many women gainfully employed part-time or full-time in beer brewing, urban agriculture and homecraft production.
The purpose of this paper is to bring together the relevant information on income distribution in Kenya. This information is needed in support of the arguments put forward in the report. It will also add to our knowledge of the structure of income distribution in Kenya, on which relatively little work has been done in the past.

This paper should be read in conjunction with Chapters 1, 3 and 5 of the main report, which give a detailed picture of the pattern of income distribution among low-income groups in the rural and urban areas of Kenya. Here we present tables showing the Lorenz curve of income distribution in urban areas, distribution of incomes among employees covered in the annual enumeration of employees, the distribution of income among high-income non-salaried persons, i.e. owners of businesses, large farmers, independent professional workers and companies, based on the reports of the Income Tax Department, and land distribution in the large and small farm sector as indirect evidence of income distribution in these sectors.

Towns of over 20,000 inhabitants

The household budget surveys conducted in Nairobi, Mombasa and Kisumu in the latter part of 1968 and early 1969 provide the basic data for the estimation of the distribution of income among urban households. These are the only data in existence which include estimates of such components of household income as housing subsidies, income in kind, transfers, as well as income from the sale of produce, business profits, income from casual employment and cash from regular employment (see tables 54 to 56).

The total number of households in the sample from all three towns was only 1,146, and sampling errors have not been calculated for the estimates made for each income group. Table 53 shows the number of households in the sample, by town for each income group.

The computation of the necessary data for Lorenz or Pareto distributions is given in table 57. The cumulative percentage distributions (from lowest to highest) of households and income are given in lines E and F, respectively, for each town. These data are plotted in figure 3.
Technically, the estimation of a consolidated urban income distribution from these data involves averaging percentage distributions which are weighted according to the number of households in each town. What has been done in this case amounts to the same thing. The sample distributions shown in table 53 have been grossed up so that the total number of households in each town are equal to the number shown in the Kenya Population census, 1969, Volume II; the relative distribution among income classes remains the same. The grossed-up figures of table 53 are shown in each line A of table 58. Table 58 itself shows the computation of a consolidated urban income distribution for Kenya.

It is apparent, from the data given in this note, that the distribution of income was not affected by taxation in 1968-69. A consolidated urban income distribution after taxes has been computed for comparison with the data in table 58. The computations in table 59 show that differences in the two distributions are so small as to be entirely attributable to sampling error.

Returning to figure 3, it may be noted that the distribution of income in Mombasa is more unequal than the distributions for Nairobi or Kisumu. This is contrary to what might have been expected, but it may simply reflect greater under-sampling of low-income households in Nairobi.¹

The information discussed so far relates to income distribution of urban household incomes. Another comprehensive source of data relates to income distribution among employees covered by the annual enumeration of employees. The income distribution based on the earnings of employees is shown in table 8. It should be noted that the table does not cover wage employees in the small farm sector, in small non-agricultural rural enterprises, and a proportion of employees in the informal urban sector.

Table 60 refers to earnings distribution among employees in the formal sector. Information on high-income recipients among the self-employed is given in table 61. This information is derived from the returns made to the Income Tax Department. It should be noted that there is evidence that income tax data underestimate both the number of individuals liable to income tax and the actual incomes of those assessed for income tax.

¹ See Chapter 5, pp. 43-44.
Figure 3. Distribution of income among households in Nairobi, Mombasa and Kisumu, 1968-69

A Nairobi
B Mombasa
C Kisumu
Table 54. Distribution and average composition of household incomes in Nairobi, by income group, 1968-69
(Shillings per month)

<table>
<thead>
<tr>
<th>Item</th>
<th>Income groups (shillings per month)</th>
<th>0-199</th>
<th>200-299</th>
<th>300-399</th>
<th>400-499</th>
<th>500-699</th>
<th>700-999</th>
<th>1 000-1 399</th>
<th>1 400-1 999</th>
<th>Over 2 000</th>
<th>Whole sample</th>
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<tr>
<td>Cash from regular employment</td>
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<td>307</td>
<td>410</td>
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<td>18</td>
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<td>87</td>
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<td>833</td>
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<td>1 659</td>
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<td>832</td>
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<td>1 591</td>
<td>2 698</td>
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Table 55. Distribution and average composition of household incomes in Mombasa, by income group, 1968-69 (Shillings per month)

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Source: As for table 54.
Table 56. Distribution and average composition of household incomes in Kisumu, by income group, 1968-69 (Shillings per month)

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<th>300-399</th>
<th>400-499</th>
<th>500-699</th>
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<th>1400-1999</th>
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Source: As for table 54.
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<th>200-299</th>
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<th>1 000-1 399</th>
<th>1 400-1 999</th>
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</table>

Source: As for table 54.

Key: A = number in sample x average household income in income group.
B = product of numbers in A.
C = cumulative number of households.
D = cumulative income (based on B).
E = C as percentage of sample total.
F = D as percentage of sample total.
Table 58. Computation of distribution of income among urban households, 1968-69 (before tax)

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>Income groups (shillings per month)</th>
<th>0-199</th>
<th>200-299</th>
<th>300-399</th>
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<th>500-699</th>
<th>700-999</th>
<th>1 000-1 399</th>
<th>1 400-1 999</th>
<th>Over 2 000</th>
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<td>19 693</td>
<td>15 416</td>
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<td>12 333</td>
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<td>833</td>
<td>1 181</td>
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</table>

(D) Total households  
(E) ∑ C cumulated  
(F) Households cumulated (lowest to highest)  
(G) (E) as per cent of total  
(H) (F) as per cent of total

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>Income groups (shillings per month)</th>
<th>0-199</th>
<th>200-299</th>
<th>300-399</th>
<th>400-499</th>
<th>500-699</th>
<th>700-999</th>
<th>1 000-1 399</th>
<th>1 400-1 999</th>
<th>Over 2 000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi</td>
<td>A</td>
<td></td>
<td>6 403</td>
<td>19 693</td>
<td>15 416</td>
<td>11 152</td>
<td>17 082</td>
<td>11 152</td>
<td>12 333</td>
<td>12 333</td>
<td>12 569</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
<td>88</td>
<td>253</td>
<td>342</td>
<td>444</td>
<td>592</td>
<td>833</td>
<td>1 181</td>
<td>1 659</td>
<td>2 890</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td>563 464</td>
<td>4 982 329</td>
<td>5 272 272</td>
<td>4 951 488</td>
<td>10 112 544</td>
<td>9 289 616</td>
<td>14 565 273</td>
<td>20 460 447</td>
<td>36 324 410</td>
</tr>
<tr>
<td>Mombasa</td>
<td>A</td>
<td></td>
<td>9 615</td>
<td>11 506</td>
<td>9 140</td>
<td>5 359</td>
<td>7 563</td>
<td>6 775</td>
<td>5 833</td>
<td>4 884</td>
<td>6 147 *</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
<td>127</td>
<td>241</td>
<td>337</td>
<td>434</td>
<td>581</td>
<td>832</td>
<td>1 167</td>
<td>1 687</td>
<td>3 134</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td>1 221 105</td>
<td>2 772 946</td>
<td>3 080 180</td>
<td>2 325 806</td>
<td>4 394 103</td>
<td>5 636 800</td>
<td>6 807 111</td>
<td>8 239 308</td>
<td>19 264 698</td>
</tr>
<tr>
<td>Kisumu</td>
<td>A</td>
<td></td>
<td>305</td>
<td>702</td>
<td>977</td>
<td>855</td>
<td>1 313</td>
<td>1 038</td>
<td>732</td>
<td>580</td>
<td>336</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
<td>112</td>
<td>256</td>
<td>329</td>
<td>450</td>
<td>578</td>
<td>849</td>
<td>1 165</td>
<td>1 580</td>
<td>3 430</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td>34 160</td>
<td>179 712</td>
<td>321 433</td>
<td>384 750</td>
<td>758 914</td>
<td>881 262</td>
<td>852 780</td>
<td>916 400</td>
<td>1 152 480</td>
</tr>
<tr>
<td></td>
<td>∑ C</td>
<td></td>
<td>1 886 134</td>
<td>7 934 987</td>
<td>8 673 885</td>
<td>7 662 044</td>
<td>15 265 561</td>
<td>15 807 678</td>
<td>22 225 164</td>
<td>29 616 155</td>
<td>56 741 588</td>
</tr>
</tbody>
</table>

(D) Total households  
(E) ∑ C cumulated  
(F) Households cumulated (lowest to highest)  
(G) (E) as per cent of total  
(H) (F) as per cent of total

Sources: As for table 54; also Kenya Population Census, 1969, Vol. II.

Key: * Rounding error.

A = number of households.
B = average income in income group.
C = A × B.
Table 59. Computation of distribution of income among urban households, 1968-69 (after tax)

<table>
<thead>
<tr>
<th>Item</th>
<th>Key</th>
<th>Income groups (shillings per month)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0-199</td>
</tr>
<tr>
<td>Nairobi</td>
<td>A</td>
<td>6 403</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>550 658</td>
</tr>
<tr>
<td>Mombasa</td>
<td>A</td>
<td>9 615</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>1 201 500</td>
</tr>
<tr>
<td>Kisumu</td>
<td>A</td>
<td>305</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>33 245</td>
</tr>
<tr>
<td>Σ C</td>
<td>1 785 403</td>
<td>7 702 791</td>
</tr>
<tr>
<td>Σ C cumulated households</td>
<td>1 785 403</td>
<td>9 488 194</td>
</tr>
</tbody>
</table>

Households cumulated from lowest to highest percentage

| .0851 | .2514 | .3846 | .4751 | .6105 | .7093 | .8079 | .9007 | 1.0000 |

Σ C cumulated percentage

| .0112 | .0595 | .1122 | .1583 | .2509 | .3458 | .4888 | .6667 | 1.0000 |

Sources: As for table 58.

Key: * Rounding error.

A = Number of households.
B = Average income after taxes.
Table 60. Total formal employment by sector, and percentage distribution of formal-sector employment by sector and income group, 1970

<table>
<thead>
<tr>
<th>Sector</th>
<th>Income groups (shillings per month)</th>
<th>Total number employed</th>
<th>&lt; 100</th>
<th>100-149</th>
<th>150-199</th>
<th>200-299</th>
<th>300-399</th>
<th>400-599</th>
<th>500-999</th>
<th>1000-1499</th>
<th>1500-1999</th>
<th>Over 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and forestry</td>
<td>169 045</td>
<td>61.5</td>
<td>19.9</td>
<td>9.9</td>
<td>3.3</td>
<td>1.6</td>
<td>1.1</td>
<td>0.7</td>
<td>0.7</td>
<td>0.5</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>1 701</td>
<td>7.6</td>
<td>15.3</td>
<td>10.4</td>
<td>21.4</td>
<td>6.8</td>
<td>12.1</td>
<td>11.7</td>
<td>5.9</td>
<td>1.9</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>Manufacturing and repairs</td>
<td>64 598</td>
<td>4.6</td>
<td>7.1</td>
<td>14.0</td>
<td>24.7</td>
<td>18.5</td>
<td>9.6</td>
<td>8.2</td>
<td>5.9</td>
<td>2.4</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>Building and construction</td>
<td>22 197</td>
<td>16.0</td>
<td>5.8</td>
<td>5.4</td>
<td>20.8</td>
<td>21.4</td>
<td>11.4</td>
<td>9.0</td>
<td>4.0</td>
<td>1.8</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Electricity and water</td>
<td>3 696</td>
<td>0.8</td>
<td>1.6</td>
<td>2.1</td>
<td>11.5</td>
<td>24.5</td>
<td>19.0</td>
<td>14.9</td>
<td>9.5</td>
<td>6.3</td>
<td>9.7</td>
<td></td>
</tr>
<tr>
<td>Commerce</td>
<td>49 041</td>
<td>4.1</td>
<td>20.1</td>
<td>3.7</td>
<td>15.5</td>
<td>10.8</td>
<td>9.2</td>
<td>12.3</td>
<td>7.7</td>
<td>5.2</td>
<td>11.3</td>
<td></td>
</tr>
<tr>
<td>Transport and communication</td>
<td>38 484</td>
<td>1.0</td>
<td>1.2</td>
<td>9.6</td>
<td>28.2</td>
<td>12.5</td>
<td>8.3</td>
<td>18.3</td>
<td>10.8</td>
<td>4.3</td>
<td>5.7</td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>196 618</td>
<td>17.4</td>
<td>4.7</td>
<td>19.5</td>
<td>19.9</td>
<td>16.4</td>
<td>5.2</td>
<td>6.4</td>
<td>5.0</td>
<td>2.4</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>All sectors</td>
<td>545 380</td>
<td>27.0</td>
<td>10.9</td>
<td>13.0</td>
<td>15.5</td>
<td>11.5</td>
<td>5.4</td>
<td>6.4</td>
<td>4.4</td>
<td>2.2</td>
<td>3.7</td>
<td></td>
</tr>
</tbody>
</table>

* Excluding casual workers and unpaid directors.
Scope and nature of the problem

Table 61. Distribution of individuals and companies assessed for income tax, by declared incomes, 1969

<table>
<thead>
<tr>
<th>Income bracket (£ p.a.)</th>
<th>Individuals</th>
<th>Companies, clubs, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resident</td>
<td>Non-resident</td>
</tr>
<tr>
<td>1-499</td>
<td>1005</td>
<td>6786</td>
</tr>
<tr>
<td>500-999</td>
<td>2438</td>
<td>1543</td>
</tr>
<tr>
<td>1 000-1 499</td>
<td>2687</td>
<td>342</td>
</tr>
<tr>
<td>1 500-1 999</td>
<td>1650</td>
<td>160</td>
</tr>
<tr>
<td>2 000-2 499</td>
<td>1002</td>
<td>58</td>
</tr>
<tr>
<td>2 500-2 999</td>
<td>652</td>
<td>40</td>
</tr>
<tr>
<td>3 000-3 499</td>
<td>468</td>
<td>33</td>
</tr>
<tr>
<td>3 500-3 999</td>
<td>294</td>
<td>18</td>
</tr>
<tr>
<td>4 000-4 499</td>
<td>218</td>
<td>13</td>
</tr>
<tr>
<td>4 500-4 999</td>
<td>144</td>
<td>3</td>
</tr>
<tr>
<td>5 000 and over</td>
<td>519</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>11,077</td>
<td>9,029</td>
</tr>
</tbody>
</table>

Source: Income tax returns.
Development has proceeded rapidly in Kenya, and the Government has been concerned that the benefits of development should be widespread. Nevertheless, some groups and individuals have remained excluded from those benefits, with low incomes and with no opportunity to participate in the economy as fully as they or the Government would wish.

An important part of the strategy of the mission is to provide the underprivileged with opportunities of seeking new initiatives and new directions in the process of national growth. This strategy will succeed only if related to the realities of how people live and the particular obstacles that inhibit their progress. The five case studies in this paper are obviously far from comprehensive but may help to indicate the variety of situations with which policy must deal if it is to be effective in raising the living standards of the poorest sections of Kenya's population.

School leavers

Primary-school leavers and increasing numbers of youths with secondary schooling have found the search for work in the towns a long and often fruitless quest. These are generally youths who have only recently left home in search of jobs. Their frustration is sharpened by the expectations associated with their education—expectations perhaps more heavily felt by their parents and neighbours than by themselves. One of our five brief cases examines the experience and outlook of such a young man.

"At times my life is not so fine, but even if I become angry, I can't blame anyone. Sometime I can get a vacancy, it is only if God could bless me, I will get a vacancy." Many young men and women in Kenya today echo the words of Peter, a young man of 23, who moved from his home just outside Fort Hall to seek work as a clerk in Nairobi. He has been in Nairobi since mid-1968, but he has not yet secured a job of the sort he aspires to. In the meantime, he works occasionally for a newspaper, folding advertisements, helps his uncle in a small shop, gets two or three days' work at a time filling in for someone who is ill, and sometimes buys and sells old newspapers at a small profit.
Employment, incomes and equality

Peter manages to earn about 50 sh. a month in Nairobi while he waits for one of his many applications to be accepted by some agent of God, in the guise of an employer who needs a clerk without experience and with only seven years of schooling and a year of additional training at a private business college. Peter's life in Nairobi would be grim indeed if he were not following a well known practice of living with kinsmen and friends who are already employed, while contributing as much as he can to the general upkeep of the household.

If God denies Peter his vacancy, Peter will not starve in the streets. His father and brother have land and could use his help, but "only illiterates work in the shambas ... I had better get a job instead or they will treat me as an illiterate ...". It is Peter's belief in himself and his belief that the great changes going on in Kenya will result in a job for him that keep him in town and among the unemployed.

Dependants of migrant workers

Migration has many facets, not the least important of which is the experience of the family that remains on a farm while the husband seeks new land or a job in town to improve its prospects. Women who remain behind find themselves with a whole host of new roles to play. They must take up the tasks formerly carried out by their husbands, and somehow continue with the things women have always done on small farms. There may be as many as 400,000 families in this situation, and the pressure of the work the women must accomplish puts serious constraints on their ability to benefit from activities such as extension programmes that might improve their farms and the welfare of their families. Our second case concerns a family where the absence of husband and the complications of a drought bring severe pressures.

Mrs. Imara lives on a farm in the Iveti Hills in the centre of Machakos district. By the reckoning of the Ministry of Agriculture, the area is high-potential land. It lies between 5,000 and 6,000 feet above sea level, with good average rainfall. Yet many factors increase the vulnerability of the people to drought, despite the favourable soil and generally reasonable rainfall average: Iveti is densely populated; farms are small and fragmented; Nairobi, only 50 miles away, has drawn many men who have taken up jobs and left farming to their wives; rain doesn't obey averages—some years there is plenty of rain, other years, none. This year there has been none.

With many men away, women in central Iveti have begun to take over agricultural tasks traditionally allocated to men: clearing fields, digging irrigation furrows, planting bananas, yams, sweet potatoes, sugar cane and tobacco, fertilising the ground, and producing juice from sugar cane, which has become an important source of income, especially during droughts.

Mrs. Imara buys 2 sh. worth of sugar cane, presses it in a wooden press at her home, spends 50 cents to get the tin of juice to Machakos market and makes 2.50 sh. profit when the juice is purchased by beer makers.

She also buys whole trees at 5 sh. each and converts them to charcoal. A tree will make two or three bags of charcoal at 5 sh. a bag. She also cuts her own wattle trees, sells the bark, used in tanning leather, and sells the wood to her neighbours for firewood.
Scope and nature of the problem

Such income is very important to her family's well-being in a drought, but it takes time to earn. Mr. Imara opened a new farm on the plains in 1969, but drought has ensured that no income from it will accrue to the family this year, and in the meantime Mrs. Imara must carry the whole burden in Iveti. Twelve persons are dependent on her and the 5-acre farm she must work. Two are over 50 and six are under 15. Two young women and one adolescent boy can help Mrs. Imara, who is about 60. The family has no livestock, but does own a bit of "bottom land", which continues to produce cabbages, sugar cane, cassava, sweet potatoes, arrowroot and beans. In a good season, they would be sold. Now they are needed for the family's survival. Others in the area have coffee, which is important in a drought year, but Mrs. Imara has none.

There are two children under 3 in the household. One has not yet been weaned and is at about 80 per cent of the standard weight for her age. She may be undernourished, but is not in real danger. The 25-month-old boy has been weaned and is typical of this highest-risk group in a bad year. He is at only 60 per cent of standard weight for his age and has eye trouble and diarrhoea. His hair has changed colour and texture, a sign of protein-calorie malnutrition. To make matters worse, he was recently burned while playing near the cooking fire. With no milk cows and such a small income, the children seem inevitably to suffer most. Mrs. Imara has the worry and the work, without her husband to share the burden.

Pastoral families

In the northern portion of Kenya pastoralism is a complex and demanding way of life. Family herds and the close meshing of the work of men, women and children produce an adaptation that leaves little margin for any sort of failure. A drought, the loss of a herd from lack of water and grass, the death of one of the members of the family—and the other members are reduced to extreme poverty. Famine is common in these circumstances, and the problems of the people concerned become the problems of the nation. The third case relates to the consequences of such disaster for one family.

About 200 kilometres north of Iveti, Aisha, a Somali woman, cooks gruel in a small aluminium pot. Earlier in the day she got the food from the nutrition centre in Isiolo and carried it home to her temporary house, made of bent twigs and grass, on the outskirts of town. Seven of her eight children watch as she transfers it to a wooden bowl. It is their only food for the day.

On weekdays three of the children go to the nutrition centre, where they attend primary school and get three meals of gruel made from wheat and soy flour, rice, dried milk and vegetable oil donated by CARE and the Red Cross. A fourth child is in a school for deaf children, the rest "roam the streets looking for food", as a famine relief worker said.

Every Wednesday the centre has a clinic for children suffering from severe protein-calorie deficiency. Aisha's children don't yet attend, but her neighbours have a child who is given extra skimmed milk at the clinic. The milk isn't distributed to take home, because the mothers mix it with untreated water and

1 Co-operative for American Remittances to Everywhere.
Employment, incomes and equality

increase the danger of infection. Treated water from the municipal supply costs 10 cents a debe \(^1\) and the families can’t afford it.

In 1970 and 1971, Aisha and 10,000 others received famine relief from the Government, but now the programme has been reduced and only 1,500 are receiving food from this source. Some families have been relocated in an irrigation scheme run by the National Christian Council for Kenya. The rest have been moved far to the north, but many, like Aisha, have returned to Isiolo, where there is a chance of getting some food from begging, gathering and selling firewood and picking up a bit of casual work. Some have planted small fields, but Aisha has not. Aisha is a widow who has lost the family herds in a drought. It is hard to see where the resources may come from that will break the circle of famine and dependency for Aisha and her children.

Farmers on marginal land

On the margins between the great, dry areas of northern Kenya and the well-watered highlands lies an area where stock-keeping, dry farming and the ability to use every opportunity constitute the way of life of an increasing number of people. Uncertain rainfall and the high risk of failure of crops and loss of stock set limits on their income. Yet, as our next case study attempts to show, their flexibility enables them to hold their own through such expedients as casual farm labour in the higher country. Malnutrition and lack of schooling for children, low incomes and high risks remain as pervasive constraints, nevertheless.

Kaugi is swinging along the dusty path from Katse to Runyenges. He knows the way very well. In 1961, and again in 1965, he climbed this way, high up the Embu side of Mount Kenya, so that he could work on the farms to buy food for his family. This year, maize is 70 sh. a bag, more than twice the normal price, for it has been a bad year and drought has driven up the price. Many of his neighbours ask to be paid in kind for their work on the farms in places like Runyenges. Kaugi has to decide as he walks through the dust whether he also will ask for payment in kind. He has already sold all his cattle and he has planted only half an acre of cow peas and bullrush millet on his own farm.

This routine of casual labour on distant farms with the hope of famine relief for his family has little to recommend it. It is 35 miles to Runyenges on foot, 150 miles by bus. It is exhausting, but the Kamba people have adjusted themselves to this dry, unreliable climate over many generations. They have moved about, exchanging goods and services with kinsmen and people of neighbouring tribes when times were hard, as they often are.

Marriages still take place, there are visits to friends, civil cases are heard, there is still beer. Intercropping, drought-resistant crops, staggered planting, and above all, large shifting fields make agriculture work. Cattle and sheep and goats and work on farms on higher, better watered lands complete a strategy that Kaugi learned from his father and his father’s brothers and is teaching his sons year by year.

\(^1\) A debe is roughly 20 litres.
Landlessness may have many meanings. Its meaning in industrial countries is utterly different from that in a largely rural and agrarian country like Kenya. Yet even in Kenya there are people whose life experience has been urban. For many people of the Coast, town life is ancient. A bit of land and a cow or two may be regarded as a distant, though desirable, goal, but life is mainly played out in shops and boats and wage employment. For some, no regular job is available. Our fifth case concerns one of these.

"A week has gone by without work, but the two days before that were good", Iddi thinks as he walks towards home. "Eight shillings for a full day breaking stones and four shillings the next day helping on the construction of a house. Twelve shillings in nine days, not too good and not too bad. It is God’s concern.” In a month he expects to make about 60 sh. That is what he usually manages.

If he needs extra money, he can borrow from a friend. His friends would expect to do the same. If guests arrive, well, they will help to pay the household costs. And now there are guests, he can tell that as he steps into the courtyard of his commodious house in Lamu. They are already in the central room, where visitors are received. That is where they will eat. Four side rooms and a kitchen off the side of the courtyard complete the house. A small garden of flowers in the courtyard brightens it, but no fields and kitchen gardens are available to stretch the money Iddi can earn by casual labour.

Iddi is married and thinks he may be about eighteen. His father is dead, but both his wife’s parents are still living. Iddi and his wife Zaina have no children yet. He has never been to government school but has had eight years of Muslim schooling. He can read and write Arabic, but has little facility for speaking it. His native tongue is Swahili, and he can read and write it in both Arabic and Roman script. He likes to write poetry in Swahili.

He belongs to a music club and plays the harmonium and drums. He also sings. It is the club that has gathered at his house. They practice regularly and there are standard rates for each kind of event at which they may perform: 30 sh. for all-night celebrations at a wedding, 25 sh. for the presentation of the bride. If they play at a party, the fee is 25 sh. They don’t play regularly enough to count on it for income, and when they play, half the fee goes to the club treasury. The other half is divided among the players.

Music is joyful but there isn’t enough work to earn a living. Last year he spent two months as a deck hand on a boat plying to Somalia. This year he has travelled to Faza with the club to play for a wedding. He also went to Malindi recently and spent two weeks searching for work, but there was none.

His wife, Zaina, keeps house and sews kofia, the hats worn by men on the coast. Her sewing is not the delicate embroidery but only the basic work and the white threads that mark the pattern for the embroidery. It takes three days to do one kofia, and she is paid 1.25 sh. per kofia. She uses her earnings for whatever she wishes; there isn’t enough to save.

Iddi and Zaina don’t own their house, but they pay no rent. It belongs to a friend and they “are like a watchman”. They must buy water (about 40 cents* worth a day) and all their food. It costs about 7 sh. a day to eat. They eat less
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when there is less money, and sometimes they eat with one or the other of their mothers. Other costs are a yearly tax of 48 sh., clothing, cigarettes when there is money, and sometimes the cinema.

If he had money, Iddi would buy a cow and a goat, and maybe a small farm. But life isn’t bad and sometimes there is work. “I pray for work and I expect God will give it when He wants to.”

Like Peter in Nairobi, Iddi has a strategy for living. A regular job is in the hands of God. In the meantime a living can be made. Like Mrs. Imara, he does many things and there is even a bit of money and work to be given to the Harambee movement to build a better nation and a brighter future for everyone. But participation in development is severely limited for all these people. Their situations are varied; their marginality is not.
AN EMPLOYMENT-ORIENTED STRATEGY
6. A MODEL OF REDISTRIBUTION FROM GROWTH

The basic strategy proposed in Chapter 7 is to redistribute gains in the income of the rich to investments which will raise the income of the poor, until the latter's income per head has doubled. The rich and poor are defined respectively as the top 1 per cent and the bottom third of income recipients, each of which receives about 10 per cent of total income. The incomes of the rich are to be frozen and an amount equal to what would otherwise have been the gains in the income per head of this group is to be invested in things like hybrid seed, rural credit and research into labour-intensive technology, as well as in real capital for the development of industries such as those processing agricultural products for export. These investments would mean a permanent increase in incomes of the poor, and would be additional to the investment already programmed for 7 per cent growth of the national income.

In the explanation of the strategy, the report suggests that the poor might in this way enjoy a 7 per cent rate of growth in income per head—3½ per cent from their proportional share of the normal growth of income per head plus another 3½ per cent from the investment of the transfer from the rich. This implies a doubling of the poor's income per head in about ten years, if the capital-output ratio for the special investment can be assumed to be equal to 1, in contrast to a ratio of 3 for normal investment.

The report emphasises that it is not just a transfer of income that is contemplated, but investment to create permanent gains for the poor. Transfer plus investment would, under the stated assumptions, permit a doubling in only seven years. It may be useful to set out explicitly in detail the assumptions of the model and the relationships involved. The importance of this lies not in simply arriving at a more accurate estimate of the number of years it would take to double the income of the poor per head. Far more important are questions about what the model implies for aggregate saving requirements and the savings behaviour of different income groups, for the aggregate capital-output ratio, for tax policies and tax revenues, for motivation and incentives, and so forth. In order to begin to see what some of these implications might be, we have tried to set out more explicitly the model that is described casually in Chapter 7 of the report. We then comment also on what appear to be some of the more important implications.
Employment, incomes and equality

The assumptions

(1) Initially, the poor and the rich each have 10 per cent of the total income.
(2) Each group shares equally in the growth of normal income, which is assumed to proceed at a rate of 7 per cent per annum.
(3) The capital-output ratio is 3 for normal investment.
(4) There is a special kind of capital that creates income only for the poor.
(5) The capital-output ratio for this special income is 1.
(6) Population is growing at the same rate (3.4 per cent per annum) in all classes.
(7) Gains for the rich in income per head (above the initial level) are transferred each year to the special capital stock.
(8) There is a one-year lag between this special investment and the rise in capital and income it produces.
(9) There is no saving problem. Specifically, the appropriation of all of the increments of income per head of the rich for the number of years required to double the income of the poor does not interfere with the financing of normal growth.
(10) There is no investment incentives problem. Specifically, this appropriation does not adversely affect normal investment.
(11) This appropriation is assumed also not to have any adverse effect on the allocation or supply of skilled labour.

Notation

\( Y \) is normal income, while \( Y^* \) is special income;
\( K \) is normal capital, while \( K^* \) is special capital;
\( I^* \) is special investment;
\( P \) is population;
\( \bar{Y} \) is income per head;
subscripts indicate year, while superscripts indicate class (\( r \) for rich and \( p \) for poor);
\( n \) is the number of years required for the doubling of income per head of the poor.

The equations

(1) \( Y_t = Y_o (1.07)^t \)
(2) \( K_t = 3 Y_t \)
(3) \( Y'_t = Y'_p = .1 Y_t \)
(4) \( \frac{P_t}{P_o} = \frac{P'_t}{P'_o} = \frac{P^p_t}{P^p_o} = (1.034)^t \)
Over-all strategy

\[(5) \quad I_t^* = Y_t' - \bar{Y}_o'P_t = Y_o' [(1.07)^t - (1.034)^t] \]

\[(6) \quad K_t^* = \sum_o^{t-1} I_t^* = Y_o' \left[ \frac{(1.07)^t - 1}{.07} - \frac{(1.034)^t - 1}{.034} \right] \]

\[(7) \quad Y_t^* = K_t^* \]

\[(8) \quad \frac{\bar{Y}_t^*}{\bar{Y}_o} = \frac{Y_t^* + Y_{t-1}^*}{Y_o (1.034)^t} = \frac{(1.07)^t + (1.034)^t - 1}{(1.034)^t} \]

\[(9) \quad \frac{\bar{Y}_n^*}{\bar{Y}_o} = 2 \]

The results

<table>
<thead>
<tr>
<th>t</th>
<th>Y'</th>
<th>Y''</th>
<th>\bar{Y}_o'P_t</th>
<th>I^*</th>
<th>K^*</th>
<th>Y^*</th>
<th>Y''</th>
<th>\bar{Y}_o</th>
<th>\bar{Y}_p</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100.0</td>
<td>10.00</td>
<td>10.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>10.00</td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>107.0</td>
<td>10.70</td>
<td>10.34</td>
<td>0.36</td>
<td>0.00</td>
<td>0.00</td>
<td>10.70</td>
<td>10.35</td>
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<tr>
<td>2</td>
<td>114.5</td>
<td>11.45</td>
<td>10.69</td>
<td>0.76</td>
<td>0.36</td>
<td>0.36</td>
<td>11.81</td>
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<td></td>
</tr>
<tr>
<td>3</td>
<td>122.5</td>
<td>12.25</td>
<td>11.05</td>
<td>1.20</td>
<td>1.12</td>
<td>1.12</td>
<td>13.37</td>
<td>12.10</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>131.1</td>
<td>13.11</td>
<td>11.43</td>
<td>1.68</td>
<td>2.32</td>
<td>2.32</td>
<td>15.43</td>
<td>13.50</td>
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<tr>
<td>5</td>
<td>140.3</td>
<td>14.03</td>
<td>11.82</td>
<td>2.21</td>
<td>4.00</td>
<td>4.00</td>
<td>18.03</td>
<td>15.25</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>150.1</td>
<td>15.01</td>
<td>12.22</td>
<td>2.79</td>
<td>6.21</td>
<td>6.21</td>
<td>21.22</td>
<td>17.69</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>160.6</td>
<td>16.06</td>
<td>12.64</td>
<td>(3.42)</td>
<td>9.00</td>
<td>9.00</td>
<td>25.06</td>
<td>19.83</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>171.8</td>
<td>17.18</td>
<td>13.07</td>
<td>4.11</td>
<td>12.42</td>
<td>6.21</td>
<td>23.39</td>
<td>17.90</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>183.8</td>
<td>18.38</td>
<td>13.51</td>
<td>(4.87)</td>
<td>16.53</td>
<td>8.26</td>
<td>26.64</td>
<td>19.70</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>196.7</td>
<td>19.67</td>
<td>13.97</td>
<td>5.70</td>
<td>21.40</td>
<td>7.13</td>
<td>26.80</td>
<td>19.18</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>210.5</td>
<td>21.05</td>
<td>14.45</td>
<td>(6.60)</td>
<td>27.10</td>
<td>9.03</td>
<td>30.08</td>
<td>20.82</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>225.2</td>
<td>22.52</td>
<td>14.94</td>
<td>(7.58)</td>
<td>33.70</td>
<td>8.42</td>
<td>30.94</td>
<td>20.71</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Values in parentheses would be zero if the year in which they occur were the terminal year. \(^2\) For years 0 to 7, \(Y^* = K^*\). For years 8 and 9, \(Y^* = K^*/2\). For years 10 and 11, \(Y^* = K^*/3\). For year 12, \(Y^* = K^*/4\).

Explanation of the results

Four different sets of results are shown in the preceding table, corresponding to four different assumptions about the capital-output ratio for the special investment. If the ratio is unity, as shown in rows 0 to 7, the income of the
poor per head doubles in about seven years. If it is 2, the doubling takes slightly more than nine years; if it is 3, ten-and-a-half years are required; if it is 4, eleven-and-a-half years are required. (Note that a one-year lag is assumed between the special investment and the rise in income of the poor.) These time periods can be compared with the twenty years required without the special investment (assuming the poor to share equally in growth of income per head in its absence—a dubious assumption, perhaps).

The over-all capital-output ratio declines from 3 to 2.89 in the seventh year if the special capital-output ratio is unity. It rises, instead, to 3.04 in the twelfth year if the latter ratio is 4. The share of total investment in total income for six years is 21.7 per cent instead of 21 per cent as a result of the special investment, if the special capital-output ratio is unity; and is 22.6 per cent for eleven years if the latter ratio is 4. These are not great changes, of course. The reason is that the income of the poor is so small that the capital costs of doubling it are not great. This also explains why substantially raising the special capital-output ratio does not delay the doubling very much.

Under the report’s assumption of unity for the special capital-output ratio, the poor’s share of total income would rise from 10 per cent to 14.8 per cent in seven years, while the share of the rich would fall from 10 per cent to 7.8 per cent. The growth rate of aggregate income for the seven years would be about 7.8 per cent per annum. If the terminal ratios of capital and investment to income could be maintained thereafter, the aggregate growth rate could be 7.5 per cent per annum.

Some implications

What some might find difficult to accept is that normal growth continues unimpeached by the freezing of the incomes at the top of the scale. (Note assumptions (9), (10) and (11) under sub-heading “The assumptions”, above.) The saving problem is discussed below. It seems to us that the investment incentive problem would be even more serious. In any case, however, the poor can still gain, even with a substantial decline in normal growth. The income per head of the poor could double in the report’s ten-year target period with a normal growth rate of only 5.3 per cent, instead of 7 per cent. And if the normal growth rate dropped to between 4 and 4.5 per cent, the poor would be no worse off than they would be in the absence of the programme. Of course the middle group (two-thirds of the people, receiving 80 per cent of the income) would be very hard hit by such a result: they would be much worse off, the growth of their income per head dropping from 3.5 per cent to 1.9 per cent and less than 1 per cent, respectively, in the two cases.

Another serious problem might be that of finding investments that really benefit primarily the poorest people. Experience tells us that programmes with this aim are often ultimately of more benefit to those who are already better off. More specialised programmes, costing more, might therefore be required. That is why we experimented with higher capital-output ratios for the special investment. The results show that even with substantially higher ratios the time required for doubling could be approximately that suggested in the report.

So far it seems, then, that the capital costs should not be a serious obstacle. The difficult and important tasks would seem to be to avoid possible adverse
Over-all strategy

influences on normal growth from the financing of the special programme, and to find those special investments that will mainly benefit the poor. When we take a closer look at the saving implications of the proposal we find that there may be some additional problems, however.

Let us assume that the special investment is financed by transfer of the gains of the rich directly or indirectly by taxation. There are no doubt serious problems here, but we are passing them over to concentrate on what is left—the financing of normal growth.

Consider the version of the model in which the income per head of the poor is doubled in seven years (through six years of special investment plus normal growth). Assume that the poor save nothing. The rich receive no gains in income per head for six years, so that their saving can be expected to grow simply at their population growth rate (assumed to be the same as that for other classes). This assumes that the appropriation of their gains has no adverse effects on their saving. (Note, however, that it is saving that stays in Kenya that counts, so that the assumption implies also no greater tendency to repatriate or expatriate wealth). There is some foreign saving ($S_f$) in the total, as well as some from the middle group ($S_m$).

We have then, the following expression for total saving in the sixth year:

$$S_6 = S'_6 + S'_o (1.034)^6 + S_m (1.034)^6 + [Y^m_o - Y^m_o (1.034)^6] s^m$$

where $S_m$ is the marginal propensity of the middle group to save gains in income per head. Note that the saving of the middle group has been split into the part that depends simply on the growth of numbers and the part that depends on gains in average income. The former part can be combined with that of the rich, so that the expression can be rewritten as—

$$S_6 = S'_6 + S'_o (1.034)^6 + [Y^m_o - Y^m_o (1.034)^6] s^m$$

—where $S'_o$ is domestic saving ($S'_o + S'_o$). If we know $S'_o$, we can solve for $s^m$.

Assume first that there is no rise in dependence on foreign saving, and that the latter was 6 per cent of the national income at the beginning (we believe that is somewhere near correct). That is, $S'_o = S'_o = 6$. Then the value of $s^m$ would have to be 0.32; or 32 per cent of the gains of the middle group in income per head would have to be saved, voluntarily or through taxation. This appears to constitute a very large deduction from the gains of two-thirds of the people. Alternatively, if the ratio of foreign saving to income remained constant, so that foreign saving would grow at the same 7 per cent rate, the required value of $s^m$ would be 0.18.

In summary it seems that the capital costs are not very great if the other assumptions hold. The particular method suggested to finance the special programme is not essential. The equity aspect of the strategy would be missing if the element of appropriation of the gains of the rich were eliminated. It is possible, however, to consider only a reallocation of investment and still achieve the result of doubling the poor's average income in seven years. Under the assumptions of the report, this would imply only a very slight decline in normal growth, but with the burden spread evenly over all income groups. Specifically, the remainder of the population would suffer a decline of growth.
in income per head from 3.5 per cent to 3.2 per cent in order to enable the poor to have 7 per cent growth per head. Variations between these two extremes could be achieved by some restraint on income growth in general but above-average restraint on the rich. This would yield a result somewhere between those achieved in the two cases already mentioned. The problem of finding the special investments required to raise the living standards of the poorest groups would remain, however.
This is a case study of the choice of techniques for the sealing and packaging of cans. The data were obtained in a factory where each of these processes, i.e. can sealing and packaging, is carried out by both capital-intensive and labour-intensive methods. (In the case of sealing, the labour-intensive process is used for short production runs; in packaging the labour-intensive process is about to be supplanted by the capital-intensive one.)

The purposes of the study are to examine—

(a) whether the technical alternatives for each process are efficient or not in the neo-classical sense;

(b) the factors which affect the choice of techniques by the firm;

(c) the sensitivity of choice of techniques to the wage rate; and

(d) the biases which Kenyan investment incentives might introduce into technical choices.

Sealing

Can sealing is the process of sealing one end of the can cylinder (for reasons that should be obvious, the other end is left open). For carrying out this operation, there is a highly automated technique involving the use of heavy machinery capable of sealing four cans at a time. Very little manual effort is involved, beyond machine control. The job can also be done semi-automatically on small machines which seal one can at a time and are operated by a single worker. The worker loads the machine with a can cylinder and swings a lever. The sealed can is released and the worker puts it onto a conveyor belt.

There are some problems of quality control with the semi-automated technique. About 5 per cent of the output is rejected because it is substandard; but the other 95 per cent meets international specifications. The main characteristics of the techniques are shown in table 62.
Table 62. Economic characteristics of automated and semi-automated end-sealing techniques in the manufacture of cans

<table>
<thead>
<tr>
<th>Technique</th>
<th>Initial cost of machinery (£)</th>
<th>Cost of factory space (£)</th>
<th>Number of workers per machine</th>
<th>Monthly wage rates (sh.)</th>
<th>Rate of output (cans per minute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automated</td>
<td>10 000</td>
<td>46</td>
<td>2.0</td>
<td>650</td>
<td>270</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Semi-automated</td>
<td>500</td>
<td>32</td>
<td>1.3</td>
<td>500</td>
<td>38 a</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>

1 Calculated per machine on the assumption that floor space costs £3.5 per sq. ft. * This figure allows for wastage. Actual output is 40 per minute.

The relatively high wage rates for the automatic machine arise because a skilled technician and a semi-skilled manual worker are needed to operate it. The semi-automatic machine requires one operative, but it is said to be essential also to have a skilled supervisor to every three or four machines in order to maintain quality standards.

Working capital in materials and stocks simply cannot be estimated, since this is an intermediate process in a production line. In principle, however, this part of working capital should have a proportionately greater effect in increasing the $K/L$ rates for the semi-automated technique at a given volume of output. The technical ratios of the two techniques are given below ($K$ being the initial cost of machinery plus floor space):

\[
\frac{K}{O} \quad (\text{£ per can per minute}) \\
\frac{O}{L} \quad (\text{cans per worker per minute}) \\
\frac{K}{L} \quad (\text{£ per worker}) \\
\text{Machine life (years)}
\]

Automated 37.4 14
Semi-automated 135 29.3

Both techniques are eligible: they are in a relationship of efficiency to one another in the neo-classical sense. The shorter machine life of the semi-automated technique leads to some modification of the relative positions of the techniques, but, as we shall see, it does not change the general conclusion, in the sense that there is a set of non-negative factor prices at which the short-lived machine is preferable.

The main part of the factory output is processed by the automated technique; the semi-automated technique is used for short runs of "specials". The question is whether this is a rational choice by the entrepreneur given market prices for factors.

Some crude estimates of unit costs of sealing, in shillings per 10,000 cans, are given below for each technique. It will be noted that these are not unit costs of can production since we are examining a small part of the production process only. Capital costs per can were calculated by first working out a value for annual capital cost using the relationship—
Technology

\[ p = \frac{a}{r} \left( 1 - \frac{1}{(1 + r)^n} \right) \]

where \( p \) is the present value of the stream of annual capital costs \( a \), discounted at a rate \( r \) over \( n \) years, the lifetime of the machine.

<table>
<thead>
<tr>
<th>Capital costs (sh. per 10,000 cans)—at</th>
<th>Automated</th>
<th>Semi-automated</th>
</tr>
</thead>
<tbody>
<tr>
<td>( r = 10% )</td>
<td>2.28</td>
<td>0.104</td>
</tr>
<tr>
<td>( r = 20% )</td>
<td>3.71</td>
<td>0.152</td>
</tr>
<tr>
<td>Labour costs (sh. per 10,000 cans)</td>
<td>2.70</td>
<td>9.14</td>
</tr>
<tr>
<td>Total costs (sh. per 10,000 cans)—at</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( r = 10% )</td>
<td>4.98</td>
<td>9.23</td>
</tr>
<tr>
<td>( r = 20% )</td>
<td>6.41</td>
<td>9.28</td>
</tr>
</tbody>
</table>

The estimates are obviously crude. There is no allowance for repair and maintenance costs, though this is not too worrying, given the nature of the machinery. The more serious gap is the absence of data on fuel costs. It is unlikely that they would have much effect on the general conclusions, but they might well influence the arithmetic in some of the later analysis.

The obvious conclusion is that the use of automatic equipment is sensible from the entrepreneurial point of view at current market prices for factors, and assuming that the equipment is fully utilised. At the time when the data were collected, the factory was operating at a level a little below full capacity; so that the question of the variation of unit costs with capacity utilisation is obviously worth looking into. It is also relevant to the question of further investments in can-sealing equipment to meet increases in demand.

One can make a first approximation to the variation of unit costs with capacity utilisation by assuming that capital costs are increased in proportion to the degree of underutilisation, and that unit labour costs are unchanged. Then if \( x \) is the proportion of utilisation, the solution of—

\[
\frac{k}{x} + \ell = \frac{k'}{x} + \ell'
\]

where \( k \) and \( k' \) are the unit capital costs for the capital-intensive and labour-intensive techniques, \( \ell \) and \( \ell' \) being the corresponding unit labour costs, gives the degree of utilisation below which the labour-intensive technique is preferred. Solving this for the techniques in question gives \( x = 55.4 \) per cent, which is, at first sight, well below the average annual capacity utilisation of the plant in question.

This calculation assumes implicitly that neither technique is divisible, i.e. even if the rate of utilisation were as low as 55 per cent, it would still be necessary to make the same total investment in each technique in order to attain the level of output corresponding to this rate of utilisation. If we retain this assumption, we have—

\[
x = \frac{k - k'}{\ell' - \ell}.
\]
The higher the value of $x$, the more sensitive is the choice of techniques to capacity utilisation; it follows that capacity utilisation will generally be a critical determinant of technical choice, as $k - k' \to l' - l$, or as $k + l \to k' + l'$.

In fact, however, the semi-automated technique is divisible whereas the automated one is not. In other words, provided that capacity utilisation is sufficiently far below 100 per cent, one would reduce unit capital costs on the semi-automated technique by putting in fewer machines. This possibility means that the break-even point for capacity utilisation at which an entrepreneur would be indifferent to the choice of techniques is higher than indicated in the approximate calculation above. We show in the appendix to this paper that the break-even point is given by

$$x = \frac{k - n.a.k'}{l' - l}, \text{ subject to } n.a \geq x > (n - 1) a$$

where $n = \text{number of semi-automatic machines used, and}$

$$a = \frac{Y_i}{Y} = \text{ratio of capacity output of a single semi-automatic machine to that of an automatic machine.}$$

Using this relation we find $x = 56.2$, slightly higher than in the approximate calculation.

The question of divisibility obviously becomes crucial in considering extensions to the plant. Here the firm faces the choice between installing a further automatic unit and—assuming that export prospects are very limited—under-utilising the equipment until local demand catches up; or adding incrementally to capacity by putting in semi-automated capacity in step with the growth of demand. The firm's decision will evidently be influenced by a number of factors, e.g.—

(a) the anticipated rate of growth of demand;
(b) anticipated increases in wage rates, particularly for supervisory labour;
(c) its perceptions about the danger of new entrants into the Kenyan market (i.e. it might choose to stand the high unit costs of underutilisation to deter new entrants); and

(d) the relative importance of can sealing costs in total unit costs per can.

It is almost impossible to predict which way the decision would go. One might conjecture, however, that if the firm anticipated a slow growth of demand, and if in addition it is discounting at 20 per cent (which puts a very low weight on earnings after the third or fourth year), it might well make its initial expansion using semi-automated labour-intensive equipment.

However, this is very hypothetical. A more likely situation at the moment in Kenya is that there will be a considerable and rapid growth of demand for cans; so that it is highly probable that extensions will lead to the introduction of automatic equipment. In addition, even with a slow growth of demand it is plain that the firm will sooner or later install automatic equipment in the course of its expansion programme.
Probably somewhat before the 56 per cent break-even point is reached, the firm will switch to automatic equipment (possibly laying off workers) to meet the increasing demand. The non-utilised semi-automatic equipment would then be available to absorb later growth of demand as before, provided that changes in technology or increases in wage rates did not render it obsolete. In the meantime, the overhead costs of the idle equipment would be a small addition to unit costs of sealing: the presence of equivalent capacity of idle semi-automatic machinery would add about 3 per cent to unit costs of can sealing in an automated plant operating at full capacity.

It does not seem worth while to go much further into the capacity problem at this stage. In the remainder of the analysis we assume full utilisation of the existing automatic equipment, since in reality this is not wide of the mark.

There is, however, an interesting point about the cost data which is not self-evident. The main reason why the semi-automated technique is less profitable than the automated one lies in the high cost of supervisory labour associated with labour intensity. If we imagine that the labour-intensive method could be operated without supervisory labour, its unit labour costs would fall to 6.40 sh. per 1,000 cans, and total costs would be 6.49 sh. at \( r = 20 \) per cent (compared with 6.41 sh. for the automated technique). In this case it might become profitable, even on a private benefit calculation at current factor prices, to use the labour-intensive method, particularly if there is some underutilisation of capacity. This is not altogether chimerical, because semi-automated lines of this kind apparently have been operated in the United Kingdom with very much less supervisory labour than in Kenya.

Furthermore, from a social benefit point of view there might well be a case for choosing the semi-automated line (even without shadow pricing of unskilled labour), provided there was some assurance that the workers on their own would learn to do the job without supervision within an appropriate time.\(^1\)

Packaging

Two methods of packaging are used in the factory. With the capital-intensive method cans are automatically installed on a wide conveyor belt and then dropped row by row into the cartons. With the labour-intensive method a single row of cans is fed as a batch along a conveyor. A worker armed with a wooden device picks up the whole row and drops it into the carton. The factory is experimenting with the introduction of the automatic equipment and presumably the management contemplate further investments in it. The economic characteristics of the two methods and their technical ratios are as follows:

\(^1\) The above-mentioned suggestions may be excessively optimistic. As the workers gradually learnt to work on their own without supervision, there would be strong pressure for an increase in the wage rates of hitherto unskilled workers.
## Employment, incomes and equality

<table>
<thead>
<tr>
<th></th>
<th>Automated</th>
<th>Semi-automated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial cost of machinery (£)</td>
<td>6 000</td>
<td>600</td>
</tr>
<tr>
<td>Cost of factory space per machine (£), calculated on the assumption that floor space costs £3.5 per sq.ft.</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>Number of workers (operatives and carton packers) per machine</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Monthly wage rates (sh.)</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>Rate of output (cans per minute)</td>
<td>460</td>
<td>280</td>
</tr>
<tr>
<td>( \frac{K}{O} ) (£ per can per minute)</td>
<td>13.1</td>
<td>2.3</td>
</tr>
<tr>
<td>( \frac{O}{L} ) (cans per worker per minute)</td>
<td>153</td>
<td>56</td>
</tr>
<tr>
<td>( \frac{K}{L} ) (£ per worker)</td>
<td>2 009</td>
<td>129</td>
</tr>
<tr>
<td>Machine life (years)</td>
<td>15</td>
<td>6</td>
</tr>
</tbody>
</table>

These figures are subject to the same caveats as the cost data and technical ratios given at the beginning of this section. Nevertheless, they suggest once more that we are dealing with efficient alternative techniques, though again the disparity in machine life modifies the picture given by the crude technical ratios.

The unit costs of production are given below at market prices for factors, using a discounting rate of 20 per cent and assuming capacity utilisation. It is worth noting, however, that in this case the automated plant has to be operated at only 31.3 per cent of capacity to reduce unit costs below those prevailing with the semi-automated method. Once again, however, the greater divisibility of the semi-automated method raises interesting problems regarding the choice of techniques for new capacity.

<table>
<thead>
<tr>
<th></th>
<th>Automated</th>
<th>Semi-automated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital costs (sh. per 10,000 cans) at ( r = 20% )</td>
<td>1.30</td>
<td>0.35</td>
</tr>
<tr>
<td>Labour costs (sh. per 10,000 cans)</td>
<td>1.30</td>
<td>4.34</td>
</tr>
<tr>
<td>Total costs (sh. per 10,000 cans)</td>
<td>2.60</td>
<td>4.69</td>
</tr>
</tbody>
</table>

The automated technique is obviously the rational choice at current factor prices. The most interesting point in this connection is that packaging is one of those ancillary operations in manufacturing which are commonly thought to be labour-absorbing. In this case, at Kenyan wage rates and \( r = 20\% \), it is not so. The automated technique uses about one-third as much labour as the semi-automated one for a given output, but is preferred. The semi-automated technique uses about 16 times as many workers per unit of capital invested.

---

1 This calculation is made by comparing investment in the same output capacities of automatic and semi-automatic equipment. The method of calculation is described in the course of the earlier discussion of the effects of capacity utilisation on unit costs in sealing.
Sensitivity of technical choice to the wage rate

The main purpose of this part is to find out how the wage rate would have to fall relative to a given opportunity cost of capital (at $r = 20\%$), in order to reduce the unit costs of production of the labour-intensive alternatives below those of the capital-intensive, assuming full-capacity operation.

In order to make this calculation for can-sealing techniques, we use some rather arbitrary and potentially misleading assumptions. The problem is that can sealing involves at least three factors of production—skilled labour, unskilled labour and capital. While it is obviously unsatisfactory to use an average wage level which represents the wages paid to skilled and unskilled workers, we nevertheless do so, since it makes the calculation easier (and since the data are hardly robust enough to justify more sophisticated assumptions). In the case of packaging techniques there is no such problem, since the labour input for each technique is unskilled at a standard wage rate of 350 sh. a month. The algebra used for determining the critical average wage rate, below which the semi-automated technique will be preferred, is shown in section 2 of the appendix to this paper.\(^1\) The results are as follows: for sealing, the critical average wage level is 191 sh. a month, the current average being 525 sh. a month with the automated technique and 385 sh. with the semi-automated; while for packaging the critical average wage level is 108 sh. a month and the current average 350 sh.

In both cases (i.e. in sealing and in packaging) the critical average wage levels are very low. They may be compared with average wage levels in modern agriculture; in 1969 the average earnings of agricultural labour in the modern sector were 115 sh. a month.

They may also be compared with wage rates of regular male employees in non-agricultural rural activities, which were about 107 sh. a month in 1969, if some allowance is made for payments in kind.

The average wage rates of male employees in the small farming sector were 69 sh. a month in 1969, but most of these workers would have some income from their own shambas, so this figure is artificially low.

These comparisons suggest that the implicit wage levels which would have to be achieved (by means of an employment subsidy, for example) in order to make the labour-intensive alternatives viable would almost certainly be below any meaningful shadow price for labour in the economy. A policy of employment subsidy in this type of situation could result in a loss of output in the short run, as well as slower growth of employment opportunities in the future.

The case is clearest for the packaging process. In spite of the fact that this is an ancillary operation, average wage levels would have to be exceptionally low to induce the private entrepreneur to apply the labour-intensive method. But the same is true of the sealing process, when one bears in mind that the average wage rate in this case is that of workers with scarce supervisory skills as well as of unskilled operatives. In short, the problem about increasing labour intensity in these two cases is not so much the lack of efficient techniques; it is that the shadow wage rates implied by adoption of the labour-intensive variants are almost certainly below the opportunity cost of unskilled labour. In other words

\(^1\) See p. 381.
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the labour-intensive techniques might be efficient in the formal sense but their productivity is so low that they cannot compete even if one makes extreme assumptions about shadow prices of labour and capital.

The bias caused by the investment deduction system

Strictly speaking, of course, prevailing market prices for capital are partially determined by the investment deduction. For purposes of exposition, however, we shall regard the deduction system as a distortion of hypothetical market prices.

On that assumption, it is pretty clear that the investment deduction system did not influence the choice of techniques for the two processes considered here. It is possible, however, to make an estimate of the bias which the investment deduction system introduces, by working out how it affects the critical average wage levels at which the labour-intensive process becomes viable from the private point of view. The procedure used is simple. The initial deduction of 20 per cent of fixed assets in the first year of operation may be converted into an annual allowance on capital cost, using precisely the same accounting procedure as for converting the initial investment into an annual capital cost. This procedure is equivalent to reducing the capital costs of the process in the proportion 40 per cent $\times$ 20 per cent, i.e. 8 per cent at the current profit tax rate of 40 per cent. It can be shown that this will result in an equivalent proportionate reduction in the critical wage levels (see section 3 of the appendix). The procedure is based on the assumption that the investment deduction is in essence a capital sum made available to the entrepreneur by means of tax relief, on which he can obtain a rate of return of 20 per cent (assuming that is the appropriate opportunity cost of capital to the firm). The results are shown in table 63.

Table 63. Current average wage levels, and critical levels with and without the investment deduction, in can sealing and packaging (sh. per month)

<table>
<thead>
<tr>
<th>Operation</th>
<th>Current</th>
<th>Critical Without investment deduction</th>
<th>Critical With investment deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sealing</td>
<td>525</td>
<td>191</td>
<td>176</td>
</tr>
<tr>
<td>Packaging</td>
<td>350</td>
<td>108</td>
<td>99.4</td>
</tr>
</tbody>
</table>

It is worth noting also that to achieve its objective, any employment subsidy to induce entrepreneurs to choose the labour-intensive alternatives in the processes examined here would require a very much larger transfer payment than the present investment allowance.

Another way of influencing the firm’s decision might be to put a tax on capital. At full capacity utilisation, it would need a tax of 80 per cent on initial investment expenditure to make the firm prefer the labour-intensive can-sealing technique to the capital-intensive. In the case of packaging the tax would have to be 220 per cent on initial investment (see section 4 of the appendix). It must be stressed, however, that as a matter of fact there would probably be social disbenefits in using the labour-intensive techniques in these particular processes, so that those figures are for purposes of demonstration, not policy.

1 On p. 381.
Concluding remarks

One cannot generalise from such a narrow case study (two sub-processes in one factory), but the analysis demonstrates some points which are worth bearing in mind in broader discussions on the choice of techniques.

The first of these is that the existence of neo-classically efficient labour-intensive techniques does not necessarily mean that these techniques will be socially optimal even if formal employment and income redistribution have a high weighting in the objectives function of the country. We have suggested that semi-automated sealing and packaging in the canning industry could be justified only at shadow wage rates that are almost certainly below the opportunity costs of the various types of labour involved in Kenya. The problem in connection with the semi-automated techniques is not that they are inefficient in the formal sense (i.e. there is no technical rigidity in the normal sense of the term); it is simply that even though they are efficient, their labour and capital productivities are too low compared to those of the automated techniques to make them viable at any realistic shadow wage rates. They are a vintage of techniques which have been overtaken by capital-intensive technological change.

A second quite interesting point is that the automated packaging technique gives very much lower unit costs than semi-automated methods, even though packaging is an ancillary operation. It is very often argued that ancillary operations are particularly susceptible to labour-capital substitution and hence a potential source of industrial employment. The point seems to be that while it is true that it is generally much easier to isolate a range of efficient labour-intensive techniques in ancillary operations, it does not necessarily follow that the labour-intensive ones will be usable. Whether it is desirable to use them or not depends on the shadow wage rate.

A final point relates to the role of supervision. The main problem about semi-automated sealing, for example, is that it requires supervisory labour. Supervision here is essentially a substitute for worker skills. This situation should be distinguished from the case of labour-intensive rural works (for example), where supervision is a necessary complementary input, simply in order to organise large numbers of workers. The distinction might be quite important. Whereas an increase in labour intensity on a rural works project will nearly always demand more supervision (as a complementary organisational input), this need not be the case in a manufacturing process. In the latter case, a more labour-intensive process may or may not require supervisory skills, but one cannot say a priori that it will. A great deal depends on the precise pattern of skill inputs required for various techniques, and this need not vary systematically along the production function—at least for individual manufacturing processes: some labour-intensive processes may demand very little skill and consequently require very little supervisory labour, while others may be like the semi-automated techniques in can sealing.
1. Capacity utilisation and divisibility

Let $\bar{K}$ = the capital cost of a capital-intensive machine which produces an output $\bar{Y}$,

$$\frac{\bar{K}}{\bar{Y}} = k,$$

$\bar{K}_i$ = the capital cost of a labour-intensive machine which produces an output $\bar{Y}_i$,

$$\frac{\bar{K}_i}{\bar{Y}} = k'.$$

Consider costs of output on the capital-intensive machine, for any output $O^*$ where $O^* < \bar{Y}$.

Total capital cost will be $\bar{K} = k \bar{Y}$, and total cost, $\bar{K} + \ell O^* = k \bar{Y} + \ell O^* = k \bar{Y} + \ell x \bar{Y}$,

where $x = \text{degree of capacity utilisation} = \frac{O^*}{\bar{Y}}$.

This gives total costs $= \bar{Y} (k + \ell x)$. (1)

Capital costs of producing output $O^*$ on the labour-intensive machine equal—

$$\bar{K}_i \cdot n,$$

where $n = \text{number of machines used}$ and—

$$n \bar{Y}_i \geq O^* \geq (n-1) \bar{Y}_i.$$ (2)

Now

$$\bar{K}_i = k'. \bar{Y}_i = k'.a. \bar{Y},$$

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where \( a = \frac{Y_i}{Y} \), the ratio of capacity output on the capital-intensive to capacity output on the labour-intensive machines.

Total costs of producing on the labour-intensive machine thus equal—

\[
n k' . a . \bar{Y} + \bar{L}' . x. \bar{Y}.
\]  

(3)

The entrepreneur would be indifferent to the choice between the techniques if expression (1) = expression (3), i.e. at that value of \( x \), the degree of capacity utilisation which equates total unit costs of production on the two techniques, allowing for indivisibilities.

Therefore \( \bar{Y} [n k' a + \bar{L}' x] = \bar{Y} [k + \bar{L} x] \)

or \( x (\bar{L}' - \bar{L}) = k - n . a . k' \)

or \( x = \frac{k - n . a . k'}{\bar{L}' - \bar{L}} \)

where \( n \) is subject to condition (2).

2. Critical average wage rate

Let \( w = \) critical average wage rate.

Then—

\[
\frac{\bar{K}}{\bar{Y}} + w \frac{\bar{L}}{\bar{Y}} = \frac{\bar{K}_i}{\bar{Y}_i} + w \frac{\bar{L}_i}{\bar{Y}_i}
\]

or—

\[
w = \frac{\bar{K} - \bar{K}_i}{\bar{Y} - \bar{Y}_i} \cdot \frac{\bar{L}_i}{\bar{Y}_i} \cdot \frac{\bar{L}}{\bar{Y}}
\]

The greater the difference between the capital-output ratios of the two techniques, and the smaller the difference in labour productivities, the higher is the critical average wage rate, i.e. the closer to actual wage rates.

3. Investment deductions

The investment deduction reduces capital costs in a proportion \( a \), when—

\( a = t . d. \)

and \( t = \) profits tax rate

and \( d = \) permitted investment deduction.
Hence from section 2 above, the new critical average wage rate will be—

\[ W^* = (1-a) W. \]

Now \( W - W^* = \Delta W = aW, \)

or \[ \frac{\Delta W}{W} = a, \] the proportionate reduction in the critical average wage rate.


We now allow wage rates to differ between the two techniques (as they do in practice).

In order to change the entrepreneurial preference for the capital-intensive techniques, one might apply a tax \( t \), given by—

\[ \frac{K}{Y} (1 + t) + \frac{wL}{Y} = \frac{K_i}{Y_i} (1 + t) + \frac{w'L_i}{Y_i}, \]

that is \( t = \frac{\frac{w'L_i}{Y_i} - \frac{wL}{Y}}{\frac{K}{Y} - \frac{K_i}{Y_i}} - 1. \)
EMPLOYMENT AND TECHNICAL CHOICE IN ROAD CONSTRUCTION

This paper focuses directly on road construction with the purpose of describing the special features within this sector and highlighting the employment implications of present policies. Long-term policy changes and short-term action proposals are put forward which aim at exploiting the employment potential inherent in road construction.

In the current development plan, roads account for 22 per cent of total projected public-sector development expenditure, or £43 million, which is the largest single sum allocated to any single item in the plan. For comparison the projected expenditure on some other single development inputs is as follows: agricultural development, £17.3 million, or 9 per cent; water supplies, £7.96 million, or 4 per cent.

The extent of the network of main roads, according to the 1971 road inventory, is given in table 64. It can be seen that the main increase has taken place in the secondary road system, and seemingly rightly so. The allocation of funds for road maintenance in 1971-72 was £3.7 million.

A great part of the road works are being carried out by large foreign contractors and being supervised by foreign consulting engineers on behalf of the Ministry of Works. Another construction agency is the National Youth Service,

| Table 64. Total length of roads by type, 1971, and increase over 1970 |
|---------------------------------|-----------------|-----------------|-----------------|
|                                | Primary system  |                | Secondary system |                | Total |
|                                | Km              | Percentage      | Km              | Percentage      | Km    |
|                                |                 | increase        |                 | increase        |       |
| Bitumen                        | 2 897           | 12.3            | 206             | 16.3            | 3 103 |
| Gravel and earth              | 7 300           | 1.7             | 23 574          | 15.9            | 30 874 |
| Unclassified 1                 | 1 465           | 0.0             | 9 490           | 5.8             | 10 955 |
|                                | 11 662          | 2.3             | 33 270          | 12.9            | 44 932 |

1 Former Northern Frontier District.

Source: Statistical abstract, 1971, table 149.
Employment, incomes and equality

which is the largest contractor in the country in terms of stock of modern equipment, provided by the United States Agency for International Development (USAID). Only about 10 per cent of the road works are carried out by the Ministry directly, also using highly capital-intensive methods.

By and large the only substantial operations still reserved for manual labour are culvert installation and the digging of bridge foundations. It is true that as compared with construction methods in developed countries, more men are being employed in general, as turnboys, etc., but this is mainly due to the fact that the road construction in developed countries is in a sense undermanned because of very high wages. However, the order of magnitude of capital intensity remains the same—about £20-30 per man-day of work.

Past and present employment trends

In recent years, contractors on some projects have been obliged to employ a given minimum of labour. At first, these projects were more in the nature of unemployment relief than anything else. The contract documents and specifications were drawn up in the normal way, specifying what should be done, but very little about how. Our general impression is that contractors more or less asked the labourers in excess of what they used to employ to step aside so as not to be in the way of the machines, and that the labourers in fact did very little productive work. The many drawbacks of this approach are evident.

A more constructive approach has been adopted now. Not only are the minimum number of labourers specified (e.g. 500-700), but specific operations are prescribed as requiring labour-intensive methods. On one project which the mission visited, and which was carried out by the Ministry of Works, a labour-intensive method was reported to be satisfactory, whereas on another the project authorities said that it was too slow. Productivity was approximately the same on both projects, namely 17 m$^2$ per man-day (for a layer 23 cm thick). The allegation that the method used on the latter project was slow therefore needs much more quantification. If the method was slow compared with the method used for the other operations, there would seem to be scope for employing more people on the "slow" operation. The snag in this case, however, seemed to be that the supervisory capacity was too low to manage more people, both on the work site and in the construction camp. This fact is often one of the major reasons for the deprecating attitude of many engineers, especially foreigners, towards increasing the number of those employed on a project. It should be mentioned here that the "slow" project was situated in a sparsely populated area, whereas the other was in a densely populated area, where the labourers did not need a special camp but received an accommodation allowance instead.

Unfortunately, a hand-packed stone base is not included in any recent analysis of contract rates, so a cost comparison with the nearest substitutes (crusher run base or waterbound stone base) cannot be made. The hand method may be more expensive on larger jobs than the latter two, but the crucial point is just how much more expensive. The Ministry of Works describes both of the above-mentioned projects as "labour-intensive", as opposed to other "ordinary" projects. The use of labour-intensive methods is still regarded as an
extraordinary measure (something to show to a mission on unemployment), but at least in this case, the common notion that a project is either wholly capital-intensive or wholly labour-intensive has been abandoned.

A case study

A report made some years ago by a consultant\(^1\) shows the danger of concentration on extreme cases. The report compared construction methods for making settlement scheme roads. Although a shadow wage (2.25 sh. a day) for labour was used, the wholly capital-intensive method turned out to be cheaper than the wholly labour-intensive. With the report's productivity data as a starting point and an estimated 1971 nominal labour cost (8 sh. a man-day) applied to them, a similar analysis has been made. The details are given in table 65. The first two columns show the original comparison made by the consultant. It is clear that the wholly capital-intensive method is cheaper.

The next three columns show how other methods of construction can be evolved by combinations of the first two. They are all suitable from an engineering point of view. A comparison of the most labour-intensive method and mixed method I shows that the former is inferior to the latter; not only does it cost more but the capital per man-day of work (table 66) is higher (1.2 as against 1.0).

This becomes very clear when the methods are plotted on the capital-labour graph (figure 4) and the lines drawn between the points, whereby a production function is obtained. Points north-east of the shaded lines correspond to methods that are inferior in terms of economic efficiency to methods for which the points are on the line. It will be seen that the most labour-intensive method is plotted to the north-east of the shaded line.

Various cost lines are drawn in the figure. The objective is to minimise cost and economise on scarce resources: the lines nearest to the origin, but touching the production function, indicate the optimum method under the given relative costs of capital and labour (illustrated by the gradient of the cost lines). Line A indicates the relative costs at the time of writing. The other lines are drawn as break-even cost lines, i.e. they go through two points, and the cost is the same whichever of the two points is chosen. In table 65 the relative costs which would bring about the various lines are given. The whole analysis is a simple linear programming model.\(^2\)

The purpose of making this analysis is primarily to show that the persistent concentration on extreme cases in road building is wrong. It is believed that many job opportunities have been forgone because of this misconception. Kenya "settlement" (access) roads, for example, might have been built in different ways.

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\(^2\) A note of caution needs to be sounded here. The crucial resources, namely skilled labour and managerial staff, are left out of account. When a method is chosen from the graph, it is necessary to test whether or not constraints relating to those other resources might not rule out the method in question. (A computerised linear programme would take all resource constraints into account.)
### Employment, incomes and equality

Table 65. Comparison of cost of methods of differing capital and labour intensity for the construction (Shillings)

<table>
<thead>
<tr>
<th>Operation</th>
<th>Most labour-intensive method</th>
<th>Most capital-intensive method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>Clearing light bush</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Removing topsoil</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Cutting to cross-fill</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Stripping overburden, quarrying</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Excavating and mounding gravel</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Loading and transporting gravel</td>
<td>5000</td>
<td>1000</td>
</tr>
</tbody>
</table>

All operations 1:

| Absolute figures 3 | 5000 | 1000 | 600 | 42000 | 48000 | 14300 | 1400 | 700 | —   | 16400 |
| Percentages        | 10   | 2    | 1   | 87    | 100   | 88   | 8    | 4   | 0   | 100   |

Key: a = Capital cost. As 98 per cent of the cost of plant goes for foreign exchange, all capital costs are regarded as calling for foreign exchange. The cost rates used are approximately the 1971 contract rates. b = Cost of materials (includes fuel minus tax). c = Wages of skilled labour (machine operators). d = Wages of unskilled labour (at the rate of 8 sh. a day, i.e. 7 sh. plus 15 per cent social overhead costs). The strict minimum of unskilled labour, required even with the most capital-intensive method, has been left out of account in all cases. e = Total, a to d.

Note: The corresponding production function is given in figure 5.

Table 66. Comparison of labour inputs and capital-labour ratios in the construction of 1 mile of gravel road by methods of differing capital and labour intensity, 1968

<table>
<thead>
<tr>
<th>Method</th>
<th>Labour input 1</th>
<th>Capital-labour ratio 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most labour-intensive</td>
<td>5000</td>
<td>1.2</td>
</tr>
<tr>
<td>Most capital-intensive</td>
<td>—</td>
<td>0.0</td>
</tr>
<tr>
<td>Mixed method I</td>
<td>4000</td>
<td>1.0</td>
</tr>
<tr>
<td>Mixed method II</td>
<td>500</td>
<td>25.4</td>
</tr>
<tr>
<td>Mixed method III</td>
<td>1600</td>
<td>5.9</td>
</tr>
</tbody>
</table>

1 Man-days of unskilled work per mile. 2 Units of capital (a + b in table 67) per unit of labour (man-day of unskilled work).

Source: As for table 64.

Obstacles to wider use of labour-intensive methods, and some proposals to overcome them

There are many more obstacles to the use of labour-intensive methods than mere misconception, as a brief analysis will indicate.

The first are factor price distortions, already considered in Chapter 9 1 which call essentially for the introduction of shadow prices to reflect social needs. The analysis in tables 65 to 67 is a way of showing what is implied in direct project evaluation terms.

1 Pages 140-143.
The corresponding number of man-days is as follows: clearing light bush, 84; removing topsoil, 1,120; cutting to cross-fill, 3,200; stripping overburden, quarrying, 158; excavating and mounding gravel, 262; loading and transporting gravel, 184. The analysis excludes drainage structures, spreading and compaction, and final cleaning. Rounded to nearest third-last digit.


Table 67. Variations required in the cost of either labour or capital to attain various break-even cost lines relating to the construction of 1 mile of gravel road (The table refers to the break-even cost lines in figure 4.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Present cost line</th>
<th>Lines of break-even cost at hypothetical prices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Present</td>
<td>A</td>
</tr>
<tr>
<td>Capital-labour ratio achieved</td>
<td>for hypothetical prices by either of the following percentage changes:</td>
<td>8.0</td>
</tr>
<tr>
<td>decrease in labour unit cost;</td>
<td></td>
<td>79</td>
</tr>
<tr>
<td>increase in capital unit cost.</td>
<td></td>
<td>127</td>
</tr>
<tr>
<td>Corresponding foreign exchange rate (Ksh/US$)</td>
<td></td>
<td>7.3</td>
</tr>
</tbody>
</table>

1Ratio of units of capital to units of labour. This ratio corresponds to the break-even wage rate i.e. the wage rate at which the cost of carrying out an activity by labour is equal to the cost of carrying it out with capital equipment.

2For line C there are two series. The series in italics supposes both a decrease in labour cost and an increase in capital cost, to the extent indicated.

Even given explicit policy directions from above, there is often a lack of experience and knowledge of productivity data on which to base planning of alternative construction methods. The staff of faculties of engineering in East
Figure 4. Production function for the construction of 1 mile of gravel road by methods of differing capital and labour intensity

Note. The corresponding detailed numerical data are given in tables 67 to 69.
Africa should be fully committed in research and teaching to solving the problem of how to develop alternative solutions. A start would be to see how “old” methods best combine with prevailing methods, but at the same time completely different technological approaches should be sought, particularly by applying the newest scientific discoveries to existing labour-intensive methods in order to improve and modernise them. A road-building technology appropriate to the objectives of the country and to the prevailing conditions should be developed. The engineer’s usual way of looking at the employment problem as something somebody else could solve better than himself should be abandoned (technicians often claim that technology is neutral, which is nonsense—it is a Harambee challenge to all sectors).

The World Bank, the ILO and some schools of engineering in developed countries (notably at the Massachusetts Institute of Technology and the Technical University of Denmark) are at present doing relevant research. However, such research will have no effect whatsoever if the East African faculties are not ready to try out and implement results, or if the Ministries of Works are not ready to take some risks.

The plans in the Ministry of Works of Kenya to collect data on the productivity both of machines and of labour should be implemented. (At the moment the plans are apparently held up for lack of qualified accountants.) Another challenging task is to develop a practical planning method to show the relative advantages of different construction methods on road works under various circumstances. The specific aim should be to identify, among the large number of activities involved in road building, the activities in which more labour could be most readily absorbed productively.

Design principles should be carefully studied. Although the newly issued standard specification of the Ministry of Works includes the previously mentioned provision for a hand-packed stone base, other similar labour-intensive elements should be included. In order to be consistent with the strategy of balanced development, it seems that most of the road building, for a considerable time, will have to be concentrated on the secondary road system. At the time of writing, the emphasis in the next group of road-building projects being prepared for loan negotiations was therefore also on rural development roads alone. This implies a lower class of road design, so that the scope for a relatively high labour content should be wider than in the previous years of high-class road building. The stipulated construction pace of each of the coming road projects could possibly be slowed down as well, which would allow more projects to be started at the same time. If that were done, it would again widen the scope for the use of more labour-intensive road construction methods.

Management complications

Any project manager prefers to supervise two men on a machine rather than 200 men with picks and shovels, provided of course that the two machine operators are well qualified and the machines well maintained and regularly supplied with spare parts and fuel. A contractor interviewed in Nyanza Province admitted that the job of cleaning up the spoil heaps at the roadside etc. behind the main road works could be done manually and probably more cheaply than
with the D6 bulldozer he always had for those odd minor jobs, owing to its underutilisation. As he said, however, the problems of organising a large labour force would give him sleepless nights.

If, simultaneously with the introduction of increases in import duty on equipment, training for overseers and foremen is intensified and geared much more to the solution of personnel management problems, contractors will be more likely to adopt more labour-intensive methods.

Another way to introduce a larger gang of labourers is to sub-contract the management of labour to somebody in the locality. ¹

A final problem in employing a labourer on road works for a limited period (not permanently, that is) is of course that after completion of one job he may want to carry out similar jobs. In fact, he may now be openly unemployed, by contrast to his former state of supposed underemployment. This is not an argument against employment in road works, but the implications should be carefully considered. In some cases, measures can be taken to help such persons fit rapidly into work elsewhere. After all, they have acquired some kind of skill from their previous employment. Moreover, it often happens that after a road is built, supplementary investments or activities are undertaken which make use of the new road and which could give rise to employment of the workers paid off upon the completion of the road works.

¹ See Chapter 11, p. 195.
This paper examines some aspects of the organisation of existing capacity to generate technical change in Kenya—mainly research and development and engineering. We were able to visit some laboratories in private industry. We also examined applied industrial research in the government institutions and in the universities. The activities of these various institutions are described below.

East African Industrial Research Organisation (EAIRO)

The EAIRO is caught in a dilemma. It is financed through the East African Community. This is excellent in principle: regional industrial research makes sense if there are economies of scale in research and development (and it is usually supposed that there are). However, in practice, in this particular case, the merits of regional research are dubious. Whatever the theoretical advantages of concentrating industrial research and development resources, the Organisation has not really benefited. It is still very small, with a total budget of sh. 1.5 million and a staff of 13 qualified scientists (of whom 4 are research trainees), and 19 technical supporting staff. More importantly, it has suffered from the lack of a co-ordinated industrial policy among the member countries of the Community. This is one of the reasons why it has been restricted largely to "defensive" research (small sponsored projects financed by industries experiencing particular problems), with two larger programmes (one concerned with the processing of coffee and the other with the processing of sorghum and millet).

This is a pity because in spite of being small, the Organisation is capable of carrying out applied research that is relevant to the manifest needs of the country. Its major programme on coffee processing and storage is obviously well conceived and has been productive, in particular, in speeding up the fermentation stage in coffee production. The cereals programme which is largely financed by the United States Agency for International Development (USAID) is also relevant. Its main object is to find a means of producing a cereal flour as a substitute for maize flour in semi-arid zones where sorghum and millet grow better than maize. If it works it would have desirable income redistribution effects. The Organisation has developed a small-scale process which it is demonstrating in the rural areas, with mobile units.
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Most of the smaller pieces of research have been a response to demands from small-scale enterprises, but some were initiated by scientists in the Organisation. Some of these small projects are also interesting from the point of view of distribution and employment. The following examples may be mentioned.

(1) The Organisation has developed solar water-heating systems, which can be fabricated locally by small-scale sheet metal enterprises, and which could provide hot water for domestic use in rural areas. On the face of it, this technique would give gains in rural welfare at much lower capital-output ratios than conventional methods of supplying hot water, and would probably be more labour-intensive and less skill-intensive to manufacture than alternative water-heating systems. Moreover, the solar heating systems might be manufactured by craftsmen in the rural informal sector, although it is still an open question whether unit costs of manufacture would not be lower in the formal sector in spite of higher wage rates.

(2) The ceramics section has reconditioned, tested and brought back into production disused kilns for the manufacture of bricks and tiles.

(3) The ceramics section is also studying techniques for using glazed Kisii stoneware for electrical insulators, and exploring the possibility of using the skills of Kisii craftsmen to manufacture the ceramic units. Glazing itself might be done centrally, and would also be a source of labour-intensive employment. The electrical properties of these insulators are still being tested.

(4) The Organisation has developed techniques for the commercial manufacture of oriato, a natural dyestuff, used in small quantities in some dairy products, which is obtained from the seeds of a bush that grows widely in the coastal area and elsewhere. The market is small at present, although some manufacturing firms are already interested, but there may be scope for expansion because of current reactions against synthetic additives in foodstuffs in advanced countries.

The Kisii stoneware project is an example of projects which the Organisation has itself initiated, in spite of the constraints under which it operates. These projects have tended to be concerned with labour-intensive small-scale production at low unit costs. In other words, the Organisation has a sense of relevance, which is rare among industrial research groups in developing countries. Furthermore, the research programmes show that a research and development laboratory can create new investment opportunities and make new technological advances in labour-intensive technologies; and also that it can help to develop local capital goods fabrication capacity for this type of technology. The solar heating systems provide an example in the latter respect, although there has been little progress in the application of this technique, possibly because of bureaucratic inertia.

Obviously, the fact that much of the research done in the Organisation is relevant is a natural response to the demands of those who request its assistance—small enterprises which tend to be labour-intensive anyway. There is always a danger that if the Organisation were set free to initiate research on a wider scale, this sense of relevance might be dissipated because the larger group of scientists would become more involved in fundamental work, but this is not an inevitable outcome.
The convention in the Engineering Faculty is that members of the staff spend up to one-third of their time in research. In fact very few manage to do so because of the teaching load. There are 48 persons on the staff (only seven of whom are East African), and they may provide a total of 10 to 12 man-years of research time each year. Some members of the staff are consultants, and consultancy and research often overlap. In addition, postgraduate students and final year undergraduates (on project work) contribute to research output. The total effort is probably somewhat greater than at the EAIRO.

It is difficult to generalise about the orientation of research in the Faculty, except in some limited ways. In one respect the Faculty is somewhat exceptional among engineering institutions in developing countries: although there is some fundamental research activity which has no particular relevance to the Kenya environment, it is a very small proportion of the total effort, involving only part of the research time of two members of the staff. (There may be a certain amount of non-oriented fundamental work at the M.Sc. level, but this is hard to determine.) For the most part departmental research is directed towards the problems of Kenya.

It is even more difficult to generalise about research orientation in terms of the particular aspect which is the subject of this paper, except perhaps to say, first, that there is not much research or design work for small-scale enterprises in the informal sector and, secondly, that up to the present there has been very little research in agricultural engineering. The research consultancy effort of the engineering departments can be roughly classified in the following way:

(1) Activities undertaken for ministries or local authorities

A number of projects and consultancy activities fit into this category. For example, there is a fairly large project on railway signalling systems for the East African Railways and Harbours Corporation, in anticipation of electrification; a project under which electrical engineers are applying control theory to traffic in Nairobi so as to optimise traffic flows; a study on optimal routing of telephone traffic in Kenya for the East African Posts and Telecommunications Corporation. All of these are being done in the electrical engineering department, and involve undergraduate project work as well as staff and postgraduate research. The civil engineering department has done road research for the Ministry of Works and the Nairobi City Council. This research has covered things like road building on problem soils (like black cotton soils), surface difficulties on Kenyan roads, and analysis of moisture changes and temperature variation in road beds. The work has involved postgraduate and undergraduate students. There is also design consultancy for the Ministry of Works.

(2) Activities for large-scale enterprises

The Faculty has not done much work for larger enterprises. It is generally agreed that there is sufficient capability in its departments to tackle at least a number of the design, construction and operational problems which the larger firms come up against; but since these firms are mainly foreign-owned, with large engineering resources in their parent companies, they do
not have much incentive to apply to the University. There are occasional demands for assistance with design and operational problems which require quick solutions, but these do not occupy much of the research and consultancy time of the staff of the Faculty.

(3) Other activities for local industries and agriculture

There is some research for these sectors. It might account for one-quarter of the research and consultancy time of the staff. In addition, a number of technicians on the University staff have acted as consultants for smaller firms. For example, the civil engineering department has a programme on the properties of local timber and its uses, which is mainly concerned with technologies for small-scale sawyers and the use of local timber for low-cost housing. This work is led by a member of the teaching staff.

There are also projects in the mechanical engineering department which fit this category. For example, there is research on the development of breakdown saws for Kenya softwoods in anticipation of investments in a paper mill; there are also projects on problems of friction and wear in Kenyan industry (survey study), on pyrethrum drying, and on water collection from soils in dry areas. There has been some experimentation with a hand-powered maize planter operating on a very small scale. This could be a useful innovation. Hybrid maize requires more concentrated planting than conventional maize, and a small machine which automatically determines the planting pattern could help small-scale farmers to make a rapid transition to new practices. The effect would probably be to diminish labour input during planting but to increase land yields, and possibly also employment at harvest time.

This third group of projects is the most immediately relevant to small-scale enterprise and to the objective of redistribution of income between urban and rural areas. However, it accounts for a relatively small part of the research programme. The greater part is directed towards large construction projects which (when they reach the actual construction phase) would probably involve large foreign enterprise and foreign machine suppliers. Members of the staff of the Faculty said that their contacts with small local companies were very limited (though technicians on the staff often have some consultancies in this sector). They also had very little knowledge of local fabrication industries in small-scale engineering. This is significant not only because it affects the relevance of the research done but also because it mirrors a corresponding orientation in undergraduate and graduate education. Graduates go mainly into larger enterprises and (partly because of pressure to Kenyanise) they become production engineers and managers in a relatively short time. This has prompted the introduction of courses in management.

A number of factors work together to create this orientation. In spite of curriculum reform, there is still the problem that foreign syllabuses and also the requirements of foreign professional bodies have a strong influence on what is taught. This in turn influences research orientation: research programmes usually involve undergraduate project work and graduate research for theses. There is a relationship between research orientation and the requirements of the curriculum. A further problem arises from heavy reliance on expatriate staff.
on short-term (two-year) contracts. It takes new expatriate staff members about a year to become familiar with the engineering problems in Kenya, and by the time they become adept at handling them they have to leave.

Objective institutional factors like these, rather than subjective attitudes, account for the situation. There was some expression of the conventional view: "The level of technology in local small enterprises is too low for them to be interested in us, or for us to be interested in them." But this is decidedly a minority view. Local staff and expatriates are concerned about the relevance of their work and about the small-scale sectors in particular. They have been willing to undertake some projects for labour-intensive industries where technology is supposedly unsophisticated and supposedly less interesting, and are obviously willing to undertake more. There is, however, the problem of external influence on curricula and the institutional problem that there are no real career outlets anyway for graduate engineers in research for labour-intensive enterprises.

This really seems to be the heart of the problem. It may also be technically difficult for engineers (partly because of their educational orientation) to determine the relevance of certain research to national needs. For example, there are a number of proposed projects in agricultural engineering. Some of these, like the maize planter previously discussed or devices for improving maize storage on small holdings, obviously fit in well with distributional objectives: so might a proposal for mechanical pruning of coffee (by hand-held small power tools), provided the gains from increased productivity do not all accrue to estate owners. Others, like a proposal to mechanise coffee harvesting by shake-catch systems, would obviously raise problems of employment and distribution. It is not clear how far the staff of the Faculty of Engineering takes this kind of consideration into account.

This suggests that there may not be much hope of curriculum reform and reorientation of research without more fundamental shifts in social and economic policy. A piecemeal attempt to do something about engineering graduate education will probably have negative effects. A necessary condition for resolving the present impasse is a new approach to industrialisation.

Kenya Polytechnic

The staff of the Polytechnic are less concerned with research and design activities than the University staff, though a number of them have been involved in consultancy work. In addition, Polytechnic students carry out project work in the later stages of their courses. These projects have tended to be for government departments. A few examples are: examination of fatigue failures in diesel-electric locomotive members and development of a new design (which was then proposed to English Electric); the development of instrumentation to measure impulse noise in the telephone system; and the development of a relay protection testing unit for the East African Power and Lighting Co. Ltd. Members of the UNESCO unit attached to the Polytechnic have also been involved in research, including studies of failure in rotary blades on disc ploughs, which resulted in a new design suited to local soils, and study of failures in propane gas cylinders.
Most of the students at the Polytechnic are already in employment, and their attendance at courses is sponsored by their employers. A majority of the engineering students come from larger firms or government departments, including the East African Railways workshops. The courses are organised around the requirements of the City and Guilds Certificate, and it would be true to say that the Polytechnic is basically responding to the conventional technician requirements of the larger engineering establishments. There is very little contact with smaller firms, except among a few members of the teaching staff.

Once again, however, the staff is aware of a gap in engineering education in Kenya. This is the lack of any system to produce people who will be interested in the kinds of technical development which are most needed in Kenya. For example, one of the UNESCO team discussed various types of small-scale technology, including the development of improved charcoal burners which could be produced by local manufacturers, improved lower-cost hand tools for agriculture and small-scale hand-driven equipment for briquetting. These projects were mentioned as illustrations. It was difficult to get graduate engineers or former students at the Polytechnic interested in them.

Railway workshops

The railway workshops have by far the largest and best equipped engineering facilities in Kenya. For practical reasons we cannot describe the equipment and activities of the workshops in detail, but we select some particular aspects which have potential policy importance.

The workshops are equipped for repair and maintenance of all rolling stock on the East African railway system (including carriage conversions and truck body building), for steam and diesel repair and maintenance and for the manufacture of a large number of spare parts. There are precision engineering shops run by highly trained African staff, and routine metal-working shops where lower levels of skill are required. The workshops include large foundry facilities and a Bessemer converter. It is difficult to estimate the initial value of capital equipment, but it may be around £4 million. The shops employ 2,850 workers, of whom 1,100 are unskilled. The capital-labour ratio is about £1,400 per worker, which is somewhat below the average for the manufacturing sector as a whole (according to our estimates).

The shops are entering a period of change and are in need of a new policy for the future. The East African railway system has been late in shifting from steam to diesel traction, with the result that the workshops were obliged to build up their manufacture of spare parts. This change is, however, taking place fairly rapidly now. This has two immediate consequences. First, diesel locomotives generally require less repair and maintenance than do steam locomotives, so that on these grounds alone there may soon (within two years) be excess capacity in the shops. Secondly, some of the engineering facilities needed for the repair and maintenance of steam engines will not be required for the repair of diesel engines, which requires somewhat different facilities. Because of these changes the management are particularly interested at present in developing commercial contracts for spare parts manufacture, and repair
and maintenance, in other industries. This means that the workshops are at present in a better position than in the past to provide a basis for the production of capital goods in East Africa. There is little evidence that the Community authorities are really concerned to do this (in fact, some senior managers in the workshop appear somewhat concerned that the shops themselves may be drastically reduced in size and scope), but some contract work has already been built up. The workshops have produced spare parts for a number of industries in Kenya, including the Magadi Soda Company, the cement industry, the tea industry and some smaller engineering enterprises (including the Nairobi Industrial Estates). At present an important constraint on their activities is that they cannot justify the working capital costs involved in carrying a wide variety of pig-iron needed for commercial production, because their markets have been too small. This problem of scale could be overcome if a larger commercial contracting operation were developed on the basis of the East African market.

The workshops have played an important part in training Africans in engineering skills, and have generated large external economies for Kenya, though these are obviously hard to measure precisely. From the point of view of workshop management, the turnover of skilled labour is a problem. There is a fairly high rate of turnover (about one-third) of skilled technicians five years after the completion of apprenticeship. Part of the reason for this is that promotion opportunities are restricted owing to the large intake of local personnel in the 1960s; another factor is the low wages paid in the workshops by comparison with those paid by commercial firms. The losses of manpower are mainly to larger firms and constitute an important source of skills for Kenyan industry as a whole. For example, the workshops recently lost a high proportion of their instrument technicians to Kenya Canners and Kenya Orchards and to local instrument importers. They also lose technicians to smaller repair shops, particularly garages; carpenters go to the construction industry (the losses were so considerable that the workshops stopped training carpenters); and junior managers and junior foremen are recruited by practically all other branches of industry. Very few of the trained people leaving the workshops have set up on their own, and few have gone into smaller-scale enterprises.

Large metal fabricators

There are a number of large metal fabricating firms in Kenya. They deal mainly in heavy sheet-metal work, typically for the building of commercial vehicle bodies, mild steel and stainless steel tanks, furniture and house fittings and ducting. Some of these firms are also engaged in the assembly of commercial vehicles and tea and coffee machinery, and in the repair and maintenance of commercial and agricultural vehicles. They are generally relatively labour-intensive (compared to similar firms in industrialised countries, and also to other firms within the Kenyan large-scale manufacturing sector), often because of problems of scale. The firms rely heavily on unskilled labour, and except in repair and maintenance activities they do not contribute much to the development of engineering skills. Their markets are almost entirely in the formal sector of the economy, and a number of their outputs, e.g. metal window
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frames or tubular steel furniture, are essentially for the high-income market in the urban areas. At the same time this group of enterprises has the most advanced sheet-metal-working equipment in the country, and it is a potentially important branch for later development of the production of capital goods.

Company workshops

The larger foreign companies have generally set up their own repair and maintenance workshops, which also manufacture some spare parts. In terms of engineering facilities, we guess that these workshops taken together represent a large total capacity, second only to the capacity of the railway workshops. At present these facilities are frequently underutilised.

General conclusion

Certain research programmes and the design and research activities of various individuals show that new approaches to technological change are feasible in a technical sense. In spite of the predominance of capital-intensive innovation in the world economy and its supposed influence on the minds of research workers, individuals and institutes have been able to break away and make choices which are relevant to the specific social circumstances of Kenya. This has happened on a modest scale, but it is interesting and encouraging that it has happened at all.
This paper describes the effect which improved production of various crops might have on employment. The over-all net effect is summarised in table 68.

Table 68. Effects of agricultural improvements on the cultivated area and on employment by 1985

<table>
<thead>
<tr>
<th>Action taken</th>
<th>Increase (or decrease) in cultivated area (acres)</th>
<th>Increase in employment (man-year equivalents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land release through—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substitution of hybrid maize for other varieties</td>
<td>-280 000</td>
<td>100 000</td>
</tr>
<tr>
<td>Intensified use of grassland</td>
<td>-10 000</td>
<td>—</td>
</tr>
<tr>
<td>Improved land use for the cultivation of—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tea on small holdings</td>
<td>280 000</td>
<td>155 000</td>
</tr>
<tr>
<td>Horticultural crops for domestic markets</td>
<td>120 000</td>
<td>55 000</td>
</tr>
<tr>
<td>Passion fruit and pineapples</td>
<td>50 000</td>
<td>50 000</td>
</tr>
<tr>
<td>Pyrethrum</td>
<td>40 000</td>
<td>20 000</td>
</tr>
<tr>
<td>Other crops</td>
<td>55 000</td>
<td>25 000</td>
</tr>
<tr>
<td>Bringing new land into use for—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotton</td>
<td>95 000</td>
<td>57 000</td>
</tr>
<tr>
<td>Potatoes</td>
<td>55 000</td>
<td>27 000</td>
</tr>
<tr>
<td>Other crops</td>
<td>20 000</td>
<td>20 000</td>
</tr>
<tr>
<td>More intensive cultivation of—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee on small holdings</td>
<td>—</td>
<td>125 000</td>
</tr>
<tr>
<td>Tea on small holdings</td>
<td>—</td>
<td>60 000</td>
</tr>
<tr>
<td>Tea on estates</td>
<td>—</td>
<td>35 000</td>
</tr>
<tr>
<td>Sugar</td>
<td>—</td>
<td>10 000</td>
</tr>
<tr>
<td>Other crops</td>
<td>—</td>
<td>10 000</td>
</tr>
<tr>
<td>Total</td>
<td>95 000</td>
<td>437 000</td>
</tr>
</tbody>
</table>
Maize

Projections of the introduction of hybrid maize to 1980 suggest that the area under that crop will increase to some 1 to 1.5 million acres by that date. At an average yield of 15 bags per acre of hybrid maize in 1980 and assuming yields of local maize of 5 bags per acre, domestic maize requirements, including 2 million bags for livestock feed, could be met from 2.45 million acres (table 69).

Table 69. Aggregate effects of increasing yields of different varieties of maize, 1972–85

<table>
<thead>
<tr>
<th>Year</th>
<th>Production (millions of bags)</th>
<th>Yield (bags per acre)</th>
<th>Area (millions of acres)</th>
<th>Domestic consumption (millions of bags)</th>
<th>Livestock consumption (millions of bags)</th>
<th>Domestic consumption per head (bags)</th>
<th>Population (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Hybrid</td>
<td>Other</td>
<td>Total</td>
<td>Hybrid</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>1972</td>
<td>7.0</td>
<td>0.76</td>
<td>1.81</td>
<td>2.57</td>
<td>17.0</td>
<td>1.0</td>
<td>1.4</td>
</tr>
<tr>
<td>1980</td>
<td>9.8</td>
<td>1.25</td>
<td>1.20</td>
<td>2.45</td>
<td>21.7</td>
<td>2.0</td>
<td>1.4</td>
</tr>
<tr>
<td>1985</td>
<td>13.2</td>
<td>1.50</td>
<td>0.80</td>
<td>2.30</td>
<td>26.4</td>
<td>4.0</td>
<td>1.4</td>
</tr>
</tbody>
</table>

The population projections are taken from Assumption D of Cramer: Some notes on the population of Kenya, op. cit.

On these assumptions, 120,000 acres of land would be released from maize growing for the production of other crops, for example tea and horticultural crops. Higher levels of yield for hybrid maize, or a higher proportion of the total maize acreage under hybrid maize, would result in the release of further land.

Thus, if the area under hybrid maize increases to 1.5 million acres by 1985 and hybrid and other maize yields increase to 16 and 8 bags per acre respectively, domestic consumption requirements would be met from 2.3 million acres, and another 150,000 acres would be released for other crops.

The direct employment consequences of the increasing area under hybrid maize, estimated on the basis of labour-land coefficients for small farms, are of the order of 100,000 man-year equivalents. The kinds and amounts of fertiliser and insecticide required to increase maize yields can be worked out on the basis of known relations between crop yields and inputs, and converted into monetary terms in order to assess their effect on the balance of payments. Less easy to quantify is the magnitude of the extension effort required to achieve the necessary rates of introduction of hybrid maize among small farmers, and target yield levels.

Grassland

Much the same arguments as apply to the land-releasing effects of the adoption of hybrid maize can be made with respect to the intensified use of grassland through fertilisation, controlled grazing, improved management and improvements in the food conversion efficiency of dairy and beef cattle. The
internal market for milk products will continue to grow, but the present producer price is clearly a disequilibrium one. It should be possible to raise grassland productivity at a higher rate than the growth in the internal market for milk products, so that land at present under pasture in the high-potential areas could be made available for other crops—tea, horticultural products and pyrethrum. It is assumed for our summary calculations that 10,000 acres will be released by 1985.

Potatoes

As a crop, potatoes constitute an alternative to maize at high altitudes. They are also an acceptable substitute for maize as the staple component of a diet that could be supplemented by meat products and legumes.

We assume for the purpose of our summary calculations in table 70 that 20,000 acres of potatoes will be planted by 1985 in high-altitude areas uncultivated at present, and so create employment equivalent to 20,000 man-years over the period.

Pyrethrum

Rapid expansion in the small-scale production of pyrethrum has occurred since the sudden reversal of the situation on the international market in 1969. In calculating the employment opportunities presented by pyrethrum we have assumed that the area will double by 1985, and that 20,000 additional man-years of employment will thus be provided.

Tea

Past and projected plantings of the Kenya Tea Development Authority suggest that the following areas will be under tea on small holdings (1961 and 1971 figures included for comparison):

<table>
<thead>
<tr>
<th>Year</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>3 500</td>
</tr>
<tr>
<td>1971</td>
<td>52 370</td>
</tr>
<tr>
<td>1975 (end of third plan)</td>
<td>65 000</td>
</tr>
<tr>
<td>1978 (end of fourth plan)</td>
<td>106 000</td>
</tr>
<tr>
<td>1981 (end of fifth plan)</td>
<td>150 000</td>
</tr>
</tbody>
</table>

The fourth plan is being submitted at present for financing, and is likely to be approved. The fifth plan is still notional. A sixth plan of 30,000 acres is conceivable by 1985.

How may these acreage expansion figures be converted into job opportunities? If we aim at an annual cash income for a worker in small-scale agriculture of, say, 1,000 sh. per year (it is assumed that he has a small food plot that can be cultivated by members of the family), such an income can be obtained by working for 250 days a year plucking 40 lb. of green tea a day at 10 cents per lb. If we further assume, as seems reasonable on the available evidence, that new tea bushes coming into production will be plucked only by hired labour, the
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existing and planned plantings of tea on small holdings from 1969 to 1977 will create another 31,000 man-years of employment by 1980. If the planting programme in the fifth plan is adopted, it will create another 20,000 man-years of employment by 1985. The sixth plan would create a further 15,000.

These estimates assume an average yield of 1,000 lb. of made tea per acre. This may increase for a number of reasons. First, the genetic potential of the new varieties is increasing as time goes by. Secondly, there is an age-yield effect of some significance because most of the tea bushes on small holdings were planted less than ten years ago; yields increase with age until the plant reaches ten years, and then flatten out. Thirdly, new methods of propagation reduce the period between planting out and first yield. Fourthly, husbandry standards and the level of use of material inputs are well below optimal, but may rise because there is a direct relationship between yields per acre and labour requirements, and any increase in average yields results in a corresponding increase in employment on small holdings. Estates achieve yields twice as high as those of smallholders through better husbandry and greater use of fertilisers.

The extent to which improvements in husbandry in tea production among smallholders can be achieved during a period of rapid expansion depends largely on how far extension forces are stretched. However, if between 1980 and 1985, as a result of a combination of the four factors listed above, smallholder yields were to increase by 50 per cent on the acreage planted during the fourth plan period, then an extra 24,000 jobs would be created (4,500 × 106,000 acres/10,000 × 2) based on the assumptions 10,000 lb. of green tea = 1 man-year of employment = 1,000 sh. per year.

Increased employment opportunities in estate tea production relate to yield increases. Assuming a 3 per cent annual increase in yield, another 10,000 workers could be employed by 1985. This calculation assumes that of the 37,000 workers now employed, 30,000 are working on plucking. No increase in the number of non-harvest labour is assumed. Tea estates obtain yields that are about twice those of smallholders, and despite their use of new techniques their employment capacity per acre of land is the same as that of smallholders.

Horticulture

In areas adjacent to urban centres, land released from maize is likely to be used for the production of horticultural products in response to rising market demand. It is assumed that 50,000 acres of released maize land will go into horticultural production for local markets by 1985, and that 50,000 man-years of employment will thus be created.

Coffee

In view of the difficulty of increasing the acreage planted, increased job opportunities in coffee growing seems most likely to come from increasing yields on smallholders' shambas. The National Coffee Policy Plan has set ambitious target yields for small-scale coffee producers, and an increase of coffee yields of 1,000 lb. per acre could readily be achieved by raising husbandry standards, for example by increased recourse to such operations as mulching,

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Table 70. Production and disposal of Kenya coffee, 1970-85 (Bags)

<table>
<thead>
<tr>
<th>Item</th>
<th>1970-72 ³</th>
<th>1974 ³</th>
<th>1985</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>935 000</td>
<td>1 090 000</td>
<td>1 585 000 ³</td>
</tr>
<tr>
<td>Effective export quota under the International Coffee Agreement</td>
<td>775 000</td>
<td>n.a.</td>
<td>1 280 000</td>
</tr>
<tr>
<td>Domestic consumption</td>
<td>27 000</td>
<td>n.a.</td>
<td>54 000</td>
</tr>
<tr>
<td>Sales needed to non-quota markets ⁴</td>
<td>133 000</td>
<td>n.a.</td>
<td>251 000</td>
</tr>
</tbody>
</table>

n.a. = not available.

³ Average figures for the years 1970-71 and 1971-72 are given to take account of the marked biennial variation in production.
⁴ 1970-74 Development Plan target.
⁵ This assumes an increase of four bags an acre in average yields of small holdings over the period. Estate output is assumed to grow at the rate of 2 per cent per year as a result of higher yields.
⁶ Sales needed to non-quota markets amount to production minus sales to quota markets and domestic consumption. The Ministry of Agriculture appears fairly optimistic about increasing sales to Annex B countries—various countries of Eastern Europe, the Far East, the Middle East and southern Africa, as well as Sri Lanka (Ceylon) and Sudan, that are described in the Agreement of 1962 as "having a low per capita consumption and considerable potential for expansion", and direct exports to which are not chargeable to quotas.

pruning, weeding and careful harvesting, most of which are labour-intensive. This would result in an increase in work opportunities of about 60,000 man-year equivalents earning 700 sh. per year at present rates of pay. This calculation assumes that on each of the 125,000 acres or so at present under coffee on small holdings there would be an increased work input of 100 man-days as a concomitant to achieving increases in yields of about four bags per acre.

Under the 1973 International Coffee Agreement, Kenya may be able to secure an increase, equivalent to an effective quota of about 900,000 bags, in the exportable share of her production. An increase in quota of 3 per cent per year can be expected thereafter as a result of an increase in world consumption and price increases at the quality end of the market. Table 70 suggests that on these assumptions the target increase in the yield from small holdings could find markets without excessive reliance on non-quota sales.

Cotton

Considerable difficulties have been experienced in the past in promoting the expansion of cotton production, because the yields obtained have been too low to give a worthwhile return to the farmer. Gross margin analysis reveals that only if yields of 1,000 lb. per acre are achieved will net returns exceed 300 sh. per acre.
Partly because of population pressures in the high-potential zone and partly because of the agronomic developments which have pushed the margin of cultivation into the more arid areas, migration has occurred and population growth in the medium-potential areas is much above the national average. Wisner has estimated that parts of the marginal zone known to geographers as the eastern plateau foreland (large parts of Kwale, Kilifi, Tana River, Voi, Mbere, Kitui and Machakos districts), have a population growth rate up to ten times the national average. Kwale district is one of the most important destinations for rural migration, with arrivals from as far afield as western Kenya. Large numbers of the population from highland Machakos are resettling in the drier, less crowded areas of Makuenei, Yatta, Kibwezi and Taita. New settlement is occurring in an unorganised way in other drier areas such as Meru, Karaba, Siaya and in less arid parts of the Rift Valley.

Superficially the present situation appears to be highly favourable: large numbers of landless people are moving from overcrowded areas at practically no public expense to unused previously marginal areas where they can obtain a livelihood, though at a very low standard of living. However, this is not a balanced view of the situation. There are many problems, some of them of major proportions. First, a decrease in average rainfall in Kenya is associated with an increase in variability. Hence these areas are high-risk areas for cultivation, and drought and subsequent crop failures can be expected. Secondly, the magnitude of a famine clearly increases directly with the size of the population in the area concerned. Increasing reliance upon arable cultivation in marginal areas therefore increases government responsibility for famine relief. Thirdly, these zones are liable to violent storms at a time when the ground cover is at a minimum. There are many steep slopes, and it is probably true that surface soil degradation and erosion in these areas are chronic. Fourthly, agronomic research is completely inadequate to the needs, and certain important questions such as the growing of legumes, oilseeds, cotton, sorghums and millets, mixed cropping techniques, catchment protection and development and dry-land crop

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husbandry techniques are almost entirely neglected at present. Fifthly, public works, utilities and services are below national standards because of past neglect. With this backlog of work and increased population, much more public investment will be required. The use of crude investment indices or criteria such as cost per head of population served or cost per head of current population discriminates against those areas, and is in part responsible for past neglect. Sixthly, careful planning is a prerequisite for development because of a number of land use options, the choice of any one of which precludes the use of any alternative. Although for crops these areas are regarded as of marginal utility, they are relatively well endowed for the rearing of livestock once problems such as those of disease and fodder conservation are solved. Some areas are actual or potential game areas and hence tourist attractions that may be invaluable in the 1980s and 1990s if the forecasts of some experts on the expansion of tourism are proved correct. Unrestricted and unplanned settlement could prevent such developments. These are also areas where the possibilities of irrigation are great and early dry-land settlement would increase the problems and costs of its subsequent installation. Seventhly, large areas of these arable lands have soils that are classified as seasonally waterlogged (particularly in the Coast Province and in Makueni, Kajiado and Laikipia districts). Finally, there is little coincidence between traditional tribal boundaries, land requirements and land availability. While this has not proved a major constraint to date, it is likely to prove so if migration continues at the present rate.

Public activity in the zones of medium to low potential for crop cultivation was, and is, distinguished largely by its absence. To a lesser extent, this is also true of stockraising, though extensive stockraising investments are currently being either planned or carried out. Reasons for neglect are numerous and complex. The most important is undoubtedly the cash crop fixation of the agricultural authorities and the lack of an important, exportable cash crop suited to the climate of the drier regions. Erratic production performance, due to climatic variation, pests and diseases, has marked the attempts to develop dry-land cash crops such as cotton, castor beans and tobacco. Marketable food crops such as maize, beans and pulse have not become a source of cash income because of lack of drought-resistant or short-duration varieties, transport problems, seasonal shortages or simply myopia on the part of sellers in recognising and developing opportunities.

Public investment has been centred on the cooler, wetter areas with dense population and hence lower development costs per head, or on urban areas, which are by and large not low-potential areas. In the high-potential areas, the general level of development and educational standards are higher and links with the important urban centres much stronger. Consequently, in those areas political organisation and self-help activities are strong, so that further public and private resources are directed to them. As a result, the income gap between relatively rich high-potential areas and the areas of medium and low potential is increasing. In the following sections, suggestions are made for action that would help to tap the unexploited agricultural potential in these areas and so to rectify the existing imbalance.
Crop production

In volume or value terms crop production in these areas of medium and low potential is relatively slight. However, as 1.5 million people live in medium-potential areas and 900,000 in low-potential areas, the local importance of the crops is considerable.

The successful expansion of programmes and projects in the drier parts of Kenya requires to be firmly based on data and knowledge. The East African Agriculture and Forestry Research Organisation has a small research programme directed to the marginal rainfall areas for crop production, and there are plans to expand it. At Sirere in Uganda and at Mulingano in Tanzania plant breeding research is being carried out on legumes, sorghum, millet and maize. In Kenya the Katumani agricultural research station and its outstations form the most important system. Other work is in progress at the cotton research station at Tebere, the Molinduko outstation of the Embu agricultural research station and the outstations of the Coast Province agricultural research station. In all, less than 15 per cent of planned crop research expenditure under the current plan is for crops to be grown in medium-potential areas. In view of the present and future importance of these areas, we regard the current research effort as inadequate and not sufficiently comprehensive.

On the extension front, there are a number of basic improvements that could have a considerable effect, including crop spacing, thinning, water conservation, row planting, seed dressing, seed selection and seed bed preparation. The problems of extension services are magnified in the drier areas. In particular, transport is much more difficult because of the longer distances to be covered. In some areas crops are totally neglected: for example, Marsabit district, one of the largest in Kenya, had no district crop officer when the mission was there. Although this is basically a livestock area, important pockets of crop production exist and grass, which is basic to livestock production, should be treated as a crop.

The remoteness and small size of the market help to account for the serious difficulty of obtaining inputs such as seed and fertilisers and of marketing products. In Kitui, maize prices have been found to range from 20 sh. to 80 sh. per bag, depending upon the time of the year and the size of the recent crops. We have also had reports of failure to supply inputs: for example, the Katumani maize seed production was switched from Machakos to Kitale in 1971, with the unforeseen result that the longer maturing period required at Kitale, which is cooler, caused practically no seed to be available for the whole of Machakos district in time for the 1971-72 season. Even for highly organised schemes, such as the cotton block scheme in operation at Mbere under the Special Rural Development Programme, there were failures to supply credit for insecticides at the right time.

The only really sizable Government-supported effort to improve the production of crops in the medium-potential zone has been devoted to cotton, and it has not been a success. The reasons for this are discussed elsewhere. Efforts to promote new areas for cotton production in the Coast Province are planned. This is a region where very little cotton is cultivated at present (1,000 acres in

\[1\] See Chapter 10.
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1971-72). We consider that a more promising project could be developed to rehabilitate the 50,000 acres of cotton now being grown at low levels of productivity on small farms in Nyanza and Western Provinces in western Kenya.

Livestock development

Short and long term prospects for increased employment in the livestock sector are bright. Demand for domestic consumption and export is rising fast, and is providing the necessary stimulus for production. If some important disease problems could be overcome, the prospects for export would be unlimited. On the supply side there are problems, but the over-all picture is reasonably good. First, there is a large reservoir of stock in the national herd, with a small nucleus of exceptionally high-quality stock. Secondly, the technology for production, disease control, range improvement and water development is established and proved. Thirdly, there is a vast area of largely undeveloped grazing land available. The major factors hampering modernisation of the semi-arid livestock areas are historical, socio-economic and natural, the last depending on natural phenomena such as drought and disease. They are historical in the sense that previous Governments concentrated development efforts in the higher-potential areas, neglecting more difficult areas. They are socio-economic because the traditional pastoralism and nomadism and the traditional customs and social motives underlying the way of life in the areas make it difficult to motivate the inhabitants to modernise and commercialise.

Since the semi-arid areas receive an average rainfall of 630 mm or less per year and the pattern is extremely erratic, the drought hazard is a real one. The high incidence of drought brings undue insecurity, which results in the keeping of large herds as a protection against risk and for the sake of social prestige, and in nomadic pastoralism, which involves long treks in search of water and grass. In such circumstances, it is difficult for permanent settlements to emerge and difficult to infuse technical innovations and change traditional husbandry.

The desire for large herds is traditional, and social prestige is not the only motive. A bride can be bought with cattle, and the wealth they represent is a means of exercising influence within the community. Since such motives conflict with economic pursuits and rule out the possibilities of effective commercialisation, the offtake rate of salable livestock is very low—lower than the national average of 13.2 per cent. The result is large herds, often consisting of useless stock, and a relatively low cash income per family.

An equally serious limiting factor is the incidence of animal diseases, which is a threat to increased livestock and beef production in general and hampers the production of meat for export since some of the best world markets will not accept meat from diseased cattle. In spite of vigorous control measures by the

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1 A larger herd per family is also necessary to ensure milk for the family. This may be lacking because of drought and poor animal nutrition, animal disease (and hence a high mortality rate), low management standards and the low genetic potential of the animals. It should also be noted that the uncertain milk production for the pastoralists results in keeping a very high proportion (35 per cent) of female cattle in the herd. This leads to a rapid growth in the size of the herd in a series of favourable years.
staff of the Kenya Veterinary Department, virus and tick-borne diseases still constitute real problems.  

The Government's current plan is to promote the intensive development of 5.5 million acres of grazing land, in which the existing commercial livestock farms are included, and the extensive development of another 28.5 million acres, mostly in northern Kenya. The total planned development expenditures (excluding expenditures under the land adjudication programme) in the grazing areas will be about £7 million under the current development plan, and part of this will involve assistance from international aid agencies such as the United Nations Development Programme, the International Development Agency and the Swedish International Development Agency—the latter supplying mainly credit—through the Kenya Agricultural Finance Corporation.  

The government development effort will involve the introduction of technical innovations, improvements in market systems, the expansion of feedlots (possibly similar to the UNDP-FAO beef project at Lanet) and the introduction and improvement of grazing schemes and slaughtering facilities. Other efforts will also involve the stepping-up of veterinary campaigns and various public services. Although under these efforts the livestock offtake rate might be increased by only 2 to 3 percentage points above the present level, it can nevertheless be seen that the Government views the improvement of rural lives in the semi-arid areas as being at least deserving enough to warrant high expenditures. It is this type of development priority that the parliamentary Select Committee on Unemployment has forcefully called for as a means of bridging income disparities between people and between sectors and regions.  

Although as a result of the present government programmes the beef supply function will inevitably shift to the right, nevertheless the possibility of generating an adequate exportable surplus is likely to be lost owing to increased domestic consumption, unless a more vigorous thrust than ever is placed on exploiting the livestock production potential of the semi-arid areas. An important development that will have a far-reaching influence on the creation of employment and incomes in the semi-arid zones is the establishment of feedlots on which immature animals from the drier areas can be fattened and sold as beef. By their very nature the feedlots are more capital-intensive than labour-intensive; nevertheless their spin-off effect on the pastoral areas is considerable, in that the increased livestock production and sales that they stimulate have the effect of raising incomes and employment.  

Although the estimates concerning income and employment generation are only crude approximations, there is no doubt that the government programmes, including that proposed by the International Development Agency and the Swedish International Development Agency, would raise the livestock offtake to about 17 per cent and would result in greater participation by the pastoralists in the money economy and consequently in raising their living standards. In the medium term, therefore, the implementation of these programmes, including the achievement of a through-put of 100,000 head of cattle at the Lanet beef project, would result in the creation of some 12,000 additional wage-paid job

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1 The commonest endemic cattle diseases in Kenya are bovine pleuro-pneumonia, foot and mouth disease, East Coast fever, rinderpest, anthrax and blackquarter.
opportunities in the livestock industry of the semi-arid areas, at reasonable income levels of about £40 and £160 a year for unskilled and semi-skilled jobs. Nearly 450 of these jobs would be created in the marketing channels through movements of livestock, while still others would occur in the form of self-employment among thousands of pastoral families, 11,700 of which, as already noted, will be involved in the additional grazing programme, bringing them a net income of about £250 to £1,000 a year per family, depending on the resources and the types of pastoral occupation involved.
Four types of irrigation can be usefully distinguished—large-scale organised, large-scale unorganised, small-scale organised and small-scale unorganised.

The large-scale organised irrigation projects are all supervised by the National Irrigation Board and cover a total area of about 6,000 hectares. They are very small projects in comparison with projects in Egypt, Sudan, India and Pakistan. However, there are a further 160,000 to 200,000 hectares of undeveloped irrigable land. The Board estimates that there are four jobs created by every hectare of land irrigated. The employment potential is therefore very great. Unfortunately irrigable land is only one necessary condition for development. Water in sufficient quantity at the correct time is another, and finance is a third.

Large-scale unorganised irrigation schemes do not exist at present in Kenya. The term refers to extensive furrow developments covering large areas of farm land. Such systems are found on the southern slopes of Mount Kilimanjaro. These schemes have the following desirable characteristics. First, furrow water supplies increase the income-earning potential of existing farms in the densely populated areas. Many of the unemployed come from these farms. Although these areas are ecologically of high and medium potential, this potential is limited, and the quality of life is reduced by poor farm water supplies. In the construction phase large numbers of unskilled labourers are required, though design work and engineering inputs are minimal. These projects would compete for water with large-scale downstream irrigation projects and hydro-electric power development, and it is therefore necessary to have empirical information on their cost effectiveness.

Small-scale organised irrigation is confined to about 6,000 hectares, almost exclusively on coffee estates and on farms growing horticultural crops such as pineapples. Some expansion is taking place, particularly in horticulture; it deserves to be encouraged because horticulture is more labour-intensive than the cultivation of most non-horticultural crops, and irrigation increases quality and ensures continuity in production.

Small-scale unorganised irrigation is characterised by a large number of minor irrigation projects, generally of less than 100 hectares each. Although the total area of the 32 main schemes is only about 2,000 hectares, many of
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them are located in arid low-potential areas and are locally very important as a source of employment, cash income, and food such as vegetables. All on which information is available, except one of 3 hectares, are to be found in the Coast, Eastern and Rift Valley Provinces. We consider that these schemes, though often financially unattractive, deserve support and expansion for less tangible though no less important reasons. These include their location in the very poor drought-threatened areas of the country; their actual and potential contribution to improvements in diet, particularly for young children; the possibility of integrating the production system with new systems of livestock development, including group farms; and the opportunities for cash income that are opened up. It is estimated by the water development division of the Ministry of Agriculture that there is a potential development area of 20,000 hectares scattered throughout the country.

POSSIBILITIES OF EXPANSION

All these types of irrigation have considerable established potential for expansion. The main factors restricting the exploitation of this potential are the level of costs, the capacity for making plans and carrying them out and uncertainties in production and marketing.

Two recently constructed schemes of the National Irrigation Board, Ahero and Mwea Extension, had costs of £980 and £750 per cultivated hectare respectively. At Ahero the breakdown of costs was as given in table 71.

A realistic estimate for the Upper Tana scheme is £750 per hectare inclusive of all costs except the housing of tenants and processing facilities. Estimates for the Lower Tana scheme, based upon 1965 prices, are up to £2,000 per hectare inclusive of all costs. Detailed costings for the Kano Plains scheme are not available but they are likely to be as high because the heavy soils are difficult to work, much of the irrigation water will be pumped and part of the land is below lake level and will require pumped drainage.

With development costs in the range of £700 to £1,000 per hectare, rising to £2,000 per hectare in the more difficult areas, very efficient production of high-value products is necessary if financial success is to be achieved. This in turn requires proficient management services for water supply, production and marketing. There is at present a dearth of irrigation engineers and experienced agriculturalists, but this need not be a problem in the long run.

Two items that are more difficult to assess are the technical feasibility of production and the market prospects for commodities proposed for the schemes. For example, in the report on the Upper Tana scheme 1 considerable reliance is placed upon crops such as groundnuts, field beans and soya beans, which have known disease and varietal problems. It has also been suggested that 4,000 hectares of irrigated coffee should be developed despite well known marketing problems for marginal coffee supplies and the poor quality that can be expected in the low-altitude areas set aside. Thus it is evident that, although large-scale irrigation offers considerable benefits, the costs are likely to be very high. If the Board figure for the creation of jobs is accepted, then capital cost per job is between £275 and £400.

Table 71. Breakdown of costs of the Ahero irrigation scheme
(E)

<table>
<thead>
<tr>
<th>Item</th>
<th>Per hectare</th>
<th>Per settler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration (personal emoluments, travelling, office, etc.)</td>
<td>89.8</td>
<td>144.6</td>
</tr>
<tr>
<td>Compensation</td>
<td>112.4</td>
<td>181.0</td>
</tr>
<tr>
<td>Planning (soil survey, topographic survey, design)</td>
<td>21.4</td>
<td>34.5</td>
</tr>
<tr>
<td>Layout, bush clearing, moving of people</td>
<td>47.7</td>
<td>76.8</td>
</tr>
<tr>
<td>Construction overheads</td>
<td>27.6</td>
<td>44.4</td>
</tr>
<tr>
<td>Road construction</td>
<td>36.7</td>
<td>59.1</td>
</tr>
<tr>
<td>Housing for staff, workshop, power and water supply</td>
<td>110.7</td>
<td>178.2</td>
</tr>
<tr>
<td>Pumping station</td>
<td>34.8</td>
<td>56.0</td>
</tr>
<tr>
<td>Irrigation system (canals, channels, structures)</td>
<td>81.2</td>
<td>130.7</td>
</tr>
<tr>
<td>Land preparation</td>
<td>173.1</td>
<td>278.7</td>
</tr>
<tr>
<td>Drainage system and flood control</td>
<td>62.4</td>
<td>100.5</td>
</tr>
<tr>
<td>Equipment</td>
<td>57.6</td>
<td>92.7</td>
</tr>
<tr>
<td>Housing for tenants</td>
<td>125.3</td>
<td>201.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>980.7</strong></td>
<td><strong>1 578.9</strong></td>
</tr>
</tbody>
</table>


Unorganised irrigation systems will be considerably cheaper to construct, but the level of benefits will be correspondingly lower. Construction costs of furrows in Pokot, using Harambee labour at a nominal wage of 3 sh. per day and inclusive of concrete or galvanised iron syphons, are about £1,000 per mile. In the higher, wetter areas costs will be somewhat greater. Preliminary estimates indicate costs of between £60 and £110 per farm. (Furrows would obviate proposed piped water supplies—a saving of at least £25 per farm.)

**SIZE OF FARMS AND INCOME OF SETTLERS**

A major objective of large-scale organised irrigation is to allow the maximum absorption of population. The application of this policy is open to individual interpretation of what represents the maximum. Current policy on absorption suggests that the maximum has to be consistent with sub-objectives that include—

(a) avoiding the creation of a rural slum;
(b) avoiding the creation of a future small-farm problem when average national standards have improved; and
(c) an incentive income to reward the settler for allowing himself to be submitted to an unusual degree of discipline and regulation.

These sub-objectives find expression in target incomes that in turn result in relatively large farms and large amounts of public investment per job created. At present the irrigated area per family is increasing. In 1962–63 the area cropped per family was 1.4 hectares but in 1970–71 it was 1.74 hectares.
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Over the same period gross output per holding increased from £165 to £214. The first two of the sub-objectives represent a very narrow view.

The older schemes of the National Irrigation Board at Mwea, Perkerra and Tana were designed to give settlers an annual income of £100 net of all expenses to the scheme, whereas the newer schemes at Ahero and Bunyala were designed to give £150 net income. Starting from this objective, the size of farm to be allocated was determined from farm budgets. At Mwea the size is 1.62 hectares (4 acres). Bunyala and Ahero offer prospects of double cropping, and therefore 1.62 hectares was adopted there also. To obtain farms of this area, capital expenditures of £500 to £1,600 are called for.

In 1970–71 the mean income achieved on Board schemes was £125 per holding, ranging from £162 at Mwea to £8 at Ahero. The low incomes at Ahero were attributed to severe outbreaks of disease, which now appear to be largely overcome. The target incomes and the incomes realised are in most cases very much higher than the income that settlers could obtain outside the scheme. Precise income estimates are difficult to obtain, but it seems likely that at Mwea cash income is at least four times as high as that of the most favoured of the dry-land farming neighbours of participants, and far more stable and secure. If their subsistence gained from red soil cultivation and their income from shares in the rice co-operative, holdings of cattle elsewhere and other business activities are taken into account, the tenants must be considered a privileged group among small farmers. Knowledge of the high income-earning potential of irrigation is widespread. At Tana, where mean income was £111 in 1970 and £165 in 1971, there is a waiting list of 5,000 farmers. Last year only eight families were added to the 354 already settled. The relatively high cash income and the pressure for tenancies suggest that smaller farms should be considered. This could be achieved for new schemes by reducing target incomes. If target incomes were reduced to £75, twice the present number of farmers would be employed for the same capital investment.

A smaller farm size would add to the problems of administering the scheme. More settlers would increase the extension, discipline and accounting workload. Furthermore in the initial period a much higher turnover of settlers could be expected. The average quality of the settler would decrease, and this would in turn affect production. However, public resources are utilised to develop these schemes and the benefits in terms of the profitable farming opportunities created should be shared as far as possible among the needy groups. They should not be used to create a privileged class of farmers. Any small loss in efficiency should be accepted as a cost of achieving greater employment.

Recent agronomic research has opened the way to much higher productivity, which will increase the potential returns from irrigation and render attractive some projects that were previously considered unprofitable. The most striking example of this in Kenya is the Lower Tana project. In the 1968–69 annual report of the National Irrigation Board doubts were expressed about the feasibility of developing irrigation in Tana for the production of cotton. The dramatic increase in yield and profitability achieved on a field scale, illustrated in table 72, has dispelled these doubts.

In consequence of this performance new farmers are being offered farms of 1.2 hectares (about 3 acres), and they are quite willing to accept this small area.
Agriculture

Table 72. Development of the Lower Tana irrigation scheme, 1967–71

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (hectares)</td>
<td>n.a.</td>
<td>484</td>
<td>535</td>
<td>573</td>
<td>573</td>
</tr>
<tr>
<td>Mean yield (kilograms per hectare)</td>
<td>926</td>
<td>1,683</td>
<td>2,098</td>
<td>2,230</td>
<td>2,830</td>
</tr>
<tr>
<td>Mean gross income per hectare (in shillings)</td>
<td>966</td>
<td>1,759</td>
<td>2,305</td>
<td>2,450</td>
<td>n.a.</td>
</tr>
<tr>
<td>Net income per farmer (in shillings)</td>
<td>874</td>
<td>1,614</td>
<td>2,595</td>
<td>2,222</td>
<td>3,300</td>
</tr>
</tbody>
</table>

n.a. = not available.

In a 1967 report on the Lower Tana scheme, it was assumed that ultimate cotton yields would be 1,925 kg per hectare. In 1971 yields were already 40 per cent above this. Research indicates that this is not the ceiling and that breeding should soon increase the lint percentage from 30 to 40, giving further gains.

IRRIGATION IN SETTLED AREAS

The case for smaller farms on organised projects is stronger in settled areas. This is best illustrated by the experience in Kano plains. A population census revealed about 1,000 households in the area scheduled for development. The average size of farms was 1.2 hectares (3 acres), with 55 per cent of the farms under 0.8 hectare (2 acres). Over 600 families claimed to be solely dependent on the land, but this seems unlikely, since the average area under crop was only 0.4 hectare (1 acre). The development of irrigation was based upon the 1.6 hectare (4 acre) farm system transferred from Mwea, despite the double cropping expected. Because of this size the carrying capacity of the land was reduced from roughly 1,000 families to about 500. Public expenditure on this agricultural project totalled £833,000; it was designed to intensify agricultural production, but it made over 400 families homeless, although they received compensation.

A 0.8 hectare (2 acre) farm would have created employment for all the families in the area. The acreage of rice with double cropping would have been the same as at Mwea, though total yield would probably have been somewhat lower. Mainly because of disease, the incomes of the 500 settlers have been miserably low, but this could not have been foreseen. Had production gone according to plan, there would have been a privileged group of high-income farmers surrounded by the new group of landless labourers. The members of this latter group received cash compensation and it was expected that they would purchase land elsewhere. Some efforts were made to find suitable land for them, but the majority have remained on the periphery of the scheme and have for the most part squandered or otherwise disposed of their compensation payments.

Cash compensation constituted 11.5 per cent of development costs. Although this is only a transfer payment from the Treasury to the new landless, it represents a considerable financial burden and has some influence upon the
choice of the development area. Consideration could perhaps be given to allowing owners a choice between compensation and an irrigation tenancy. If the latter option was linked to a minimum income for, say, the first five years, it might prove attractive. The minimum income scheme could be financed in one of several ways, and the compensation payments saved might be one possible source. The National Irrigation Board objects to this proposal on the grounds that it should be made perfectly clear to tenants that they are tenants and that they have relinquished all ownership rights to the land. Compensation makes this clear but it could also be made explicit in a tenancy agreement that the benefits of the tenancy are granted in lieu of compensation.

Irrigation in low-income, densely settled areas is to be encouraged because it offers a good prospect of improving living standards. In these areas every effort should be made to absorb the existing population as tenants of the scheme. Experience with the one scheme started so far with dense settlement does not suggest that priorities and objectives are correctly focused at present.

LONG-TERM IRRIGATION PROGRAMME

Organised irrigation

The ultimate objective of the irrigation authorities could be to develop fully the water resources of the Tana basin and Kano plains. The development of both areas has been established as technically and economically feasible. It is estimated that by 1990, the number of families settled on 2-acre plots under the Upper Tana, Lower Tana and Kano Plains schemes respectively would amount to 125,000, 50,000 and 35,000, at a capital cost of £600, £800 and £1,400 per family. The Upper Tana scheme would also increase employment indirectly through the generation of 657 megawatts of hydro-electric power. At present staffing densities, 8,000 senior, office and field extension staff will be required. Construction might also provide an average of 20,000 jobs a year over the period 1980 to 1990.

Small-scale organised irrigation could be encouraged, particularly for horticultural crops. To facilitate this, there must be more training, more credit, perhaps more subsidies for equipment or recurrent costs, more extension advice and more channels for marketing. It is estimated that by 1990 sprinkler irrigation might cover 20,000 hectares (50,000 acres), an increase of 14,000 hectares (35,000 acres), this increase being partly on small holdings with valley-floor or drained swamp land. The operation of equipment and cultivation might create 23,000 additional jobs.

Unorganised irrigation

Proposed large-scale furrow developments appear to be attractive because they would generate employment in the densely populated areas and because they seem to cost little. However, they would compete for scarce water supplies with organised irrigation downstream, and the opportunity cost must be

evaluated. Furthermore, the scarcity of the knowledge and control required for high returns would reduce productivity in the unorganised sector correspondingly. At present it is not possible to forecast the likely scope and effect of these developments with any degree of confidence.

There has been more experience of small projects, which are mainly in the arid, pastoral areas, and so more is known about them. A large expansion of these schemes could be contemplated. They confer considerable local benefit in terms of a more diversified and secure local source of food and partly offset expenditure on famine relief. In some areas, where livestock potential is almost exhausted, they offer one of the few alternatives to migration. In areas destined for group grazing even a small irrigation scheme would be a considerable advantage. It might form a focus for a nucleus settlement and hence an area where services and amenities could be made available.

There is great merit in the development of such small projects and their operation partly on a Harambee, or self-help, basis. They are generally too small to be economically developed and operated by the Government directly. However, the water and land resources are valuable, and technical assistance is vital. Possibly material inputs such as water control structure could also be provided. The agency responsible for this development should be the water development division of the Ministry of Agriculture, acting through the proposed district water teams or minor irrigation survey and construction units. It should be noted that budgeted costs for these schemes are less than £175 per hectare (£75 per acre) or about one-fifth of the costs of organised irrigation development. The operation of these small-scale schemes might occupy 20,000 farmers by 1990. If furrow irrigation in settled areas develops this figure will increase, while employment under organised irrigation schemes will decrease. The rate of trade-off will be determined by the ratio of water use in each area.

Concomitant investments

Long-term irrigation prospects are dependent upon the conservation of the catchment areas and integration with competing ways of using land and water. A large number of experts have stressed that catchment areas are not being conserved and that future cropping and livestock prospects and future irrigation prospects in these areas are being threatened. A few examples are sufficient to illustrate the problem. At Perkerra irrigation scheme, streams that were previously perennial are now seasonal and subject to flash floods. The silt load in the water precludes economical storage along the stream despite good dam sites. Ahero pumping station and Malindi water supply are both troubled by unprecedented quantities of silt. The main cause is the increasing pressure of population in the high-potential and medium-potential areas, which leads to the breakdown of such practices, essential to conservation, as not cultivating steep slopes and the banks of streams. The clearing of arid bush for charcoal production and over-grazing in the range areas are also problems. In the North-Eastern Province many springs that dried up in the 1970 drought have not started to flow despite adequate rainfall. This is presumed to be a result of increased surface run-off, which in turn is caused by excessive stocking and the removal of grass cover.
Employment, incomes and equality

The basic problem is that soil conservation is labour-intensive and that the benefits are external to the labourer. They are mainly reaped later in time, by the next generation and by downstream users of water. Farmers must be paid in some way for terracing and for not cultivating steep slopes and the banks of streams. Otherwise they will not undertake these measures of soil conservation. The public purchase of key land might be contemplated. With world opinion on irreversible changes in the environment as it is at present, expressed in phrases such as "only one Earth", it might be possible to obtain grant aid to support programmes for this type of conservation. In any event future developments in irrigation and hydro-electric power are very closely tied to success in soil conservation. The carrying-out of programmes of soil conservation creates a good deal of employment.

SHORT-TERM IRRIGATION

Taking the decision

A prerequisite to successful planning is the establishment of a long-term policy. A suitable declaration could be made and substantiated in the next five-year plan. When the decision has been taken, the next stage is to mobilise planning resources and prepare projects. If detailed projects are prepared, within the framework of either a national water plan or river basin development plans, external finance should be forthcoming. However, plans and finance are not sufficient to guarantee implementation. Either the authorities or contractors must have the capacity to construct. The complex range of administrative, legal, social, technical and financial problems will require sound and effective policies and strong executing agencies.

The main thrust of this policy would be towards developing the irrigable areas described in the previous section. A Tana basin planning agency is required immediately to appraise a range of possible development strategies for the area. A planning group for the Kano plains (including the Yala swamp) is also important, though less urgent since the options are fewer and less complex. These planning groups should be well staffed and serviced. A decision to develop irrigation is largely irreversible, and good initial planning undoubtedly pays.

Once the decision is taken and a detailed sustained planning effort mounted, a more rapid development of irrigation than hitherto could be considered. Depending on a favourable estimated social rate of return and the availability of funds, the construction target could be increased to 10,000 hectares per year during the 1980s so as to have an irrigated area of over 150,000 hectares by 1990.

Construction on this scale would have to be carried out by internationally selected contractors, but to ensure that expenses were not excessive, a strong local controlling agency would be required.

Institutional arrangements

The National Irrigation Board is at present a planning, constructing and operating agency. The three functions are quite separate and there are good
reasons for handing over planning and construction to a development agency. The very successful West Pakistan Water and Power Development Authority was based on such a separation of functions. Alternative institutional arrangements have recently been proposed by a United Nations Development Programme consultant, and these need careful appraisal by the Kenyan Government. Effective institutional arrangements for planning, for obtaining finance, for construction and for operation are critical to the successful development of irrigation on a large scale.

Bottlenecks in implementation

If viewed solely in the light of past performance, the proposed developments would be termed unrealistic. The rates of progress assumed suppose massive efforts and the diversion of resources. The capacity to implement plans, particularly in the shape of men and women capable of executing funded plans, is scarce at present. The underestimation of the limits set to the pace of development by questions of administration and organisation would give an unreal and unfair impression. Finance would be one problem. However, irrigation is a usual field for givers of aid, and, provided a feasible long-term plan is produced, finance need not prove a major constraint.

The proposed rates of development, though unprecedented in Africa south of the Sahara, would be modest in relation to the expansion of irrigation in Asian countries and in Egypt and the Sudan. They are considered practical because of the characteristic of the development process. Irrigation projects are located precisely and relatively easily supervised. The technology is not complex and there is some local experience of construction. Nevertheless, there are major problems. The first is the shortage of civil engineers. The irrigation programme might absorb 25 per cent of the graduate output of civil engineers planned at present—a percentage that is unpractical. Overseas recruitment can help to alleviate the deficiency to some extent, but there is no effective substitute for Kenyan engineers trained and committed to a career in Kenya.

The following comments of the former General Manager of the National Irrigation Board are relevant to the question of feasibility of expansion:

As the areas of highest population growth coincide with the home territories of the largest, most educated and most politically dynamic tribes in Kenya, it is easy to foresee considerable and increasing pressure developing in the near future for a very substantial acceleration in the rate of irrigated development.

The question then arises whether the present organisation structure of irrigated settlement could handle a greatly expanded programme. Assuming that the development was planned and rational and not a spasmodic process of politically motivated crash programmes, there is every reason to believe that the Board’s organisation could cope effectively with an orderly and substantial expansion of the operational sector of its activities. The main requirement would be adequate forewarning to produce the necessary flow of trained operational personnel.

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On the development side the picture would be far less rosy. The maximum acreage developed in one year by the Board has never exceeded 3,000 acres. Even this modest performance has put nearly unbearable strain on the Board’s resources. The near total lack of qualified irrigation engineers, surveyors, draughtsmen and heavy plant maintenance personnel, and the tiny number coming out of the training institutions, represent very severe constraints on a rapid expansion of irrigation.

Pending a drastic change in training policy and priorities, which are beyond the Board’s control, the only short-term answer is to rely very heavily on consultants and contractors. Both are inherently expensive, and can be exorbitantly so in the absence of a strong and technically competent control organisation which is firmly anchored in the national framework. The creation of such a control unit within the Board is a prime prerequisite to any expanded programme of irrigation development.¹

Short-term changes

As previously indicated, the farm size on some schemes is considered too large in view of the actual and latent demand for plots. A number of plot holders have wisely invested cash income outside agriculture and now regard their farm as a secondary source of reward. This is particularly the case at Perkerra and Mwea. It is recommended that the Government should offer to purchase their tenancies for cash and divide any acquired in this manner between two families. This might be expected to create new irrigated holdings at far less than the costs of development. Compensation of about £120 per hectare might be considered reasonable.

In order to maintain income in the face of a smaller irrigated farm size, consideration might be given to more formal integration with dry-land agriculture. Other developments could include incorporating livestock, fish farming, double cropping (at Mwea) and other such activities.

SUMMARY

The proposed procedure for developing irrigation is as follows: first, to take a definite decision and obtain the means to develop the areas of Tana basin and Kano plains that have been established as technically and economically suitable. Secondly, to extend traditional furrow irrigation, possibly on a large scale if this is proved feasible; thirdly, to continue research; fourthly, to establish smaller farms and lower income targets; and fifthly, to embark on a more rapid, though still planned, programme of development than has hitherto been considered.

13. MANPOWER FOR AGRICULTURAL DEVELOPMENT

Employment and income generation through agricultural development raises a major training problem. Its solution calls for an expanding nucleus of well-trained, experienced and dedicated personnel to man the essential services. In Kenya, at least for the present, there seems to be little problem in respect of numbers. The major questions are those of raising the quality and the effectiveness of existing personnel; relating the type and quality of training to the work to be done; designing a more dynamic training system to meet the needs; having a more progressive staffing structure in the agricultural services, in which salary and conditions for all levels more truly reflect the importance of the job to be done; and evolving a manpower strategy sufficiently flexible to cope with the changing manpower demand and supply position.

With some justification, Kenya can take pride in the wide range of facilities that have been built up over the years in agricultural education and training. These now cover the following broad classes:

(1) University education. The full Faculty of Veterinary Science was established in Nairobi in 1961 and the Faculty of Agriculture in 1970.

(2) Intermediate-level training, which in fact consists of two quite distinct levels:
   (a) the diploma level, at Egerton College, Njoro (3-year courses); and
   (b) the certificate level, at the Embu institute of agriculture, and the animal health and industry institute at Kabete (2-year courses).

(3) Short-term training of farmers, farm managers and others, mainly at 32 farmer training centres distributed widely over the country.

(4) Courses in agriculture within the general education system, mainly at the secondary level. These, however, are outside the scope of this paper, apart from any major implications they may have for trained agricultural personnel as teachers. Subsequent discussions will, therefore, be confined to the first three classes, i.e. four levels—degree, diploma, certificate and farmer training.

The physical facilities are still expanding. The second-phase education project of the International Development Association (IDA), costing some US$6.1 million in all, includes, in addition to the new Faculty of Agriculture
now operating, a new institute of agriculture, similar to that at Embu, in western Kenya, and three new farmer training centres. The expansion of the Embu and Kabete institutes and of two farmer training centres is also included. The rest of the IDA project is in the field of general and technical education, under the Ministry of Education.

It is not altogether surprising that a system which has grown up in this way should have its problems. An official view has been expressed that the training activities of the Ministry of Agriculture should now enter a period of consolidation and concentrate on improving existing institutions and raising the quality of their output. This seems wise. Many of the latest developments and improvements have resulted from the report of the Weir Commission on Agricultural Education, which reviewed the entire system in 1967, and made manpower projections up to 1980. That report was accepted in full by the Government, and, largely through the Ministry of Agriculture and its training division, it has been steadily implementing the Commission’s 58 recommendations. Unfortunately, the Weir Commission, in an otherwise fine report, did not question the appropriateness, for Kenya’s modern agricultural development, of the existing three-level (certificate, diploma, degree) structure of the formal agricultural education system. This was evidently taken as given, and the Commission recommended the expansion of all three levels with the result, up to now at least, of a virtual freezing of the training pattern, and a build-up of vested interests in each level which it may be difficult to persuade people to change. However, with the almost predictable appearance of a possible surplus of graduates at the diploma (Egerton) level, even before the new Nairobi Faculty of Agriculture has got into its full stride, there are welcome signs in some quarters of recognition that changes will have to be made.

To appreciate the urgent need for, and the significance of, the required changes, one must first understand something of the (equally rigid) structure of the Government’s agricultural services, for these at present absorb about 90 per cent of the trained output. Further, there is a very strict relation between the initial training qualification and subsequent grading within the service structure. Some 60 different job types have been listed, but basically there are four main categories of personnel in the agricultural field services:

(1) Agricultural officers and above. These must have an appropriate university degree; they normally enter the service at the level of district agricultural officer; as available numbers increase, this will be brought down to divisional level in time.

(2) Assistant agricultural officers and technical officers. These must hold an agricultural diploma, or its equivalent, from Egerton or a similar institution abroad; they normally enter the service at divisional level.

(3) Agricultural assistants and animal health assistants. All must now have certificate-level training (at Embu or Kabete), although a number of the older staff in these grades have had no formal training; they are in direct contact with the farmers, at the sub-district or location level.

(4) Junior agricultural assistants and junior animal health assistants. These rarely have more than primary education (a few of the more recent ones have

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Agricultural officials (including those with a school certificate) have no formal agricultural training and receive only on-the-job training in a limited range of improved farming practices, etc. At present, this is by far the largest staff category; they work directly with farmers at the sub-location level. It is understood that recruitment at that level has now ceased.

Not only does the structure make for a very long and cumbersome administrative chain of command (headquarters, provincial director of agriculture, district agricultural officer, divisional assistant agricultural officer, location agricultural assistant, junior agricultural assistant) but it is virtually impossible for anyone to advance from one grade to the next without first taking the full entry qualification for that level. The Weir Commission went so far as to recommend (Chapter 7, paragraph 50 of the report) that, pending changes over time, the best certificate holders should be accepted for diploma courses at Egerton College and a small number of the best holders of diplomas should be accepted as students in the University Faculty of Agriculture. On this basis a student could spend no less than eight years in formal agricultural education, much of which is bound to be repetitive, before entering the service as an agricultural officer.

Clearly, some better and more efficient system is required. The above system seems based only on the academic requirements of independent training institutions, not on the needs of the job to be done in the field. Ideally, there should be only one entry level to the general agricultural services. Thereafter, a man's advancement and promotion should depend on his demonstrated ability, aptitude and field experience, rather than on his acquiring further paper qualifications. At the moment, this may be an impracticable step in Kenya but the fact must be faced that it will be taken sooner or later and that the present multiplicity of levels and courses is only a phase in the development of formal agricultural education.

What should be done? As a first step, it is recommended that the diploma-level entry point to the general agricultural field services should be abolished. (It might be retained for the time being as an entry point for certain specialists, in which case it should perhaps be equated with degree-level entry.) The only entry level below university degree would then be holders of the certificate of agriculture (or its equivalent) in the agricultural assistant grade. Secondly, promotion to assistant agricultural officer for the best agricultural assistants after a minimum of, say, three years' field service should be through a specially designed one-year course, upgrading to the equivalent of diploma level and therefore probably best taken at Egerton College. The Ministry of Agriculture is understood to have a mandate already for the introduction of such an upgrading course, but for various reasons it has not yet acted on it.

The next logical step should be to base advancement to agricultural officer's rank and beyond strictly on merit and proven ability over a further minimum period of field service, perhaps 3 to 5 years, supplemented by an appropriate promotion course, which might be taken at the Institute of Adult Studies, the

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1 If the College, being an independent institution, wished to continue its present 3-year diploma courses in general agricultural subjects for foreign or private students or for teacher training, it would presumably be free to do so.
Institute for Development Studies, the University itself, or overseas. The
direct intake of university degree holders to the field services would be adjusted
primarily to the rising numbers of those already in the services who were suit-
able for promotion—not the reverse procedure. When sufficient men of this
calibre are coming up through the service, direct entry at the agricultural
officer level should be stopped, except for specialists not otherwise available.

The present position at the intermediate level is that the educational entry
requirement—normally the East African school certificate—is now basically
the same for both diploma and certificate institutions. A joint interviewing
board selects the entrants for both, the usual pattern being that the division I
certificate holders go to Egerton and division II and III to Embu or Kabete.
When he has graduated, the holder of a diploma, after an extra year’s training,
starts at a salary of £714 a year, but the certificate holder starts at £354.
Therefore it is strongly recommended that, whether or not the changes recom-
mended in the preceding paragraph are implemented, this quite unjustified
salary differential and status barrier be removed.

The major problems in the training and re-training of existing staff are to
be found in the large junior agricultural assistant grade and to a lesser extent
in the agricultural assistant grade discussed above. The latest available figures
indicate a total of some 2,600 in the agricultural assistant grade (of whom approxi-
mately 800 are animal health assistants and 70 range assistants) and 5,500 in the
junior agricultural assistant grade (including 1,100 junior animal health assist-
ants and 150 junior range assistants). The internal working party on agricultural
extension services of the Ministry of Agriculture (November 1970) estimated
that perhaps half the agricultural assistant grade had never received certificate-
level training, “or received it so long ago that the training would have been for-
gotten”. Of the junior agricultural assistant grade, they again estimated that
perhaps one-third were trainable. They recommended that a crash training
programme should be mounted to re-train a total of some 2,200 (1,300 junior
agricultural assistants and 900 agricultural assistants) over a three-year period,
i.e. approximately 750 a year. The Ministry has since launched a special three-
month sandwich-type training course, at several farmer training centres, for
selected groups of junior agricultural assistants. The programme is to continue
for five years. This training, however, is confined to technical subject matter,
and can be regarded only as a form of normal in-service training. Satisfactory
completion of the course carries no promise of salary increment or other
incentive for the individual. In other words, although it may provide a useful
basis for selection for further training, it goes no way towards improving the
promotion and career prospects of this category.

What is required, and what is recommended, for the entire junior agricul-
tural assistant grade and the older, untrained, element of the agricultural
assistant grade, is an exact assessment of the training needs, based on the
potential of the individual as determined not by his educational background
but by his field performance, his ability to work with farmers and carefully

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1 It is submitted that at that stage in his career an officer is not so much in need of further
technical agricultural training as of the broadening of his studies into such fields as develop-
ment economics, development planning, public administration, communication and person-
nel management. Technical subjects, however, should remain an option.
designed aptitude tests. There must be a stringent but fair weeding-out of those clearly unsuitable for further training and advancement. A phased training programme, designed for the needs of the service and on the basis of the present certificate-level training courses, should be instituted immediately to upgrade the remainder to agricultural assistant level as quickly as possible. In view of the urgency and complexity of devising and applying suitable selection criteria and formulating appropriate training programmes at this level, it is further recommended that assistance be requested from the Institute of Adult Studies of the University of Nairobi, or alternatively, from the United Nations or bilateral technical assistance services.

There are sound reasons for concentrating so much attention on this grade. It is made up of men who have been, and will be for many years to come, in constant and direct contact with the farming community. Their local knowledge and practical experience should be capitalised, not discarded. There are strong indications from studies made, that as compared with others with a higher educational level, men with this rural background, given appropriate training, make better extension workers, and when promoted, become more effective and competent supervisors. They also tend to be more content to stay in rural areas and to adapt themselves to local conditions. Such qualities are valuable assets in any agricultural service, and deserve to be rewarded by reasonably adequate career prospects.

At the certificate level particularly, considerable improvements have been made in recent years in the training programme. The contents of the training have been adjusted to the needs of field staff. Practical work has been redesigned, and given much more emphasis and time within the total training course. There is an urgent need, however, for accurate and up-to-date job descriptions for every level and category of staff within the agricultural services, from which an analysis of the training content can be made and on the basis of which training programmes can be designed and evaluated. These are essential material for any training institution, but are not as yet available in Kenya. It is recommended that the systematic compilation of job descriptions for the lower grades particularly be given a high priority by the Ministry of Agriculture.

The need to maximise productive employment in the agricultural sector should be reflected in the thinking and instruction at all levels of agricultural education and training and throughout a wide range of subjects. This may entail a considerable reorientation of farm management, for example, where the effects on labour absorption and utilisation rates of different levels of modern technology (e.g. farm mechanisation) need to be studied over a range of farming types and systems. Another subject requiring more attention, especially for field level people, is agricultural extension and communication. While the 7 per cent of time allocated to this subject at Embu should provide a good groundwork, a separate, more intensive course should be given, perhaps as induction training on joining the service, for those who will be working full time on extension duties. The training of agricultural teachers and lecturers as such, at all levels, requires continuing attention.

1 It is understood that up to 1968, a one-year upgrading course for junior agricultural assistants was run at Embu and was found to be satisfactory. It was discontinued because of the large numbers of school certificate holders now available.
Employment, incomes and equality

Very many small holdings in Kenya—the exact number is not known—are worked, and possibly managed, entirely by women, the husband working or seeking work in some urban centre. What are the implications of this situation for the agricultural extension service in particular? Would these farm women respond more readily to advice from a woman extension worker? Who is the decision-maker on the farm—is it the woman or the absent husband? If women extension workers are felt to be the answer, how many are needed and what type of training would be most appropriate? Obviously, they need training in both agriculture and home economics. Courses in these subjects are being run at both Egerton and Embu. Much work still needs to be done, however, to determine the best balance and the most appropriate content for the courses. To this end, it is recommended that studies be conducted to find out the views, interests and needs of the rural women themselves. In making this recommendation, it is not implied that all women entrants to the agricultural training institutions should be restricted to courses in agriculture and home economics: they should have as much freedom of choice as men students.

With the advent of the new Faculty of Agriculture and the possibility of some surplus output at both degree and diploma levels, the future role of Egerton College seems likely to change. The College authorities themselves have long been pressing for university status. There would seem to be little need for such an independent degree-granting institution. There may well be a case, however, with the College’s excellent facilities and well qualified staff in certain fields, for a closer integration within the structure of the University of Nairobi. A variety of working relations seem possible with the Faculty of Agriculture, for example, both at the graduate and the post-graduate levels. The College could also play an important role in providing the post-certificate-level promotion courses, suggested earlier, to replace some of their present three-year diploma courses.

With the emphasis placed on the agricultural sector as the country’s economic mainstay and the source of employment and livelihood for the majority of its people, the country cannot afford any wasteful duplication of training facilities or of scarce and highly qualified personnel. The Egerton situation seems to be a warning signal that there is need for a thorough streamlining of the whole agricultural education and training system, both quantitatively and qualitatively, to ensure better integration of all component institutions. There may be a case for having an outside consultant to look into the logistics and content of the integrated training programme recommended above, in relation to the over-all physical teaching facilities and staff available.

Some quantitative assessments of trained manpower requirements

At the moment it is estimated that there are 828 holdings per agricultural assistant. These figures compare with the Kenyan Tea Development Authority field level staffing of 400 tea growers per agricultural assistant, and the Department of Settlement average of 138 plots (or settlers), ranging from 63 to 198, per agricultural assistant, over 124 settlement schemes. Ratios of this kind have been used for estimating the long-term needs for trained manpower.
An estimated total of some 2 million agricultural holdings by 1985 (derived mainly from the population projections), can be divided into three groups as follows:

(1) Some 150,000 newly created holdings, mainly under the various schemes proposed by this mission, would require intensive extension service coverage, at least for some years; a ratio of 1 agricultural assistant per 150 holdings has been used for these.

(2) A further 850,000 holdings on which continuing intensification or diversification of production and improvement in farm management would justify at least a medium intensity of extension work; a ratio of 1 agricultural assistant per 500 holdings has been used.

(3) For the balance of 1 million holdings, whose production potential and farming systems may not lend themselves to the same degree of intensification, the generally accepted ratio of 1 agricultural assistant per 1,000 holdings has been used.

Other service needs for this level of staff have to be met, in addition to those for extension work. On the basis of present staffing patterns, these additional, non-extension, needs have been roughly estimated at 75 per cent of the extension service requirements (or 100 per cent if very intensive group (1) needs are excluded). By far the largest component here is animal health assistants for the veterinary services. Other public sector demands for this (certificate) level of personnel come from credit, marketing and research services and other sources.

As regards more senior personnel, for the purpose of these estimates the two higher levels of trained personnel, i.e. diploma and university degree holders, are grouped together as one senior category. So far as the general agricultural services are concerned, their duties are primarily of a supervisory nature and in many respects they are interchangeable, for experience shows that although, when the supply position permits, degree holders are chosen in preference to holders of diplomas, the latter are used in the meantime when the supply of university graduates is inadequate. This fact, together with the structural changes envisaged in the earlier parts of this paper, must be allowed for in the long-term planning. The ratio used here and applied uniformly throughout is 1 senior to 4 field level (certificate) personnel. The estimated requirement for 1985 then becomes 6,800 field level staff and 1,800 senior level staff.

The main value of these estimates is to serve as a broad quantitative guide to the training institutions. Taking the estimated output figures for the various training institutions from the 1970–74 Development Plan and other official sources, and allowing for an over-all staff wastage rate of 5 per cent per annum, it is estimated that 4,200 field-level staff and 3,000 senior-level staff will be available. There is thus a deficit at the certificate level of the order of 2,600, and a possible surplus at the diploma or degree level of some 1,200.

More positive indications of the trend at both the above levels will, of course, be seen long before 1985 and in time to take any necessary corrective action. The question raised immediately by the certificate-level staffing situation, however, is the role of the junior grade of junior agricultural assistants and junior animal health assistants.
To make good the 2,600 deficit would require an additional annual output of 300 to 350 over a ten-year period. If any further argument were needed to justify the need to re-train and upgrade the bulk of the present junior grade, this is it. With normal rates of wastage, there could still be some 2,500 of these men in service in 1985. If it could be ensured that by that time they had all been trained to something approaching present agricultural assistant standards, that particular staffing problem would be removed. It is strongly recommended that training efforts be concentrated to this end.

As to the possible surplus at the diploma or degree level, this would, if it materialised, provide a valuable reservoir of trained agricultural teaching personnel for employment within the general school education system. It was noted in this connection, that 117 students, or some 25 per cent of the Kenyans at Egerton College in 1971, were enrolled in the agricultural education diploma course.
14. TAXES AND SUBSIDIES ON PURCHASED AGRICULTURAL INPUTS

There may be separate cases for agricultural input taxes or subsidies on grounds of income generation, better income distribution and employment creation. In this paper the cases are discussed, and existing subsidies are reviewed in the light of the discussion.

GROUNDS FOR TAXES OR SUBSIDIES

Income generation

If one were concerned solely with maximising real national income, then it would appear obvious that agricultural inputs should be used in a combination, and up to the point at which marginal social revenue equals marginal social cost. In a static sense there would appear to be no case for either subsidising or taxing inputs unless there were divergences between private and social costs and revenues.¹

However, in considering a more dynamic situation in which technological innovations require the use of purchased inputs and will have the effect of increasing national income either directly, through raising output, or indirectly, by freeing resources for use elsewhere, then a case may be made for a temporary subsidy on the input if it has the effect of accelerating the adoption of the innovations.

While the case for a subsidy to accelerate the adoption of an innovation may be superficially appealing, the conditions under which it is likely to succeed need careful consideration.

It may be a fair generalisation to state that an innovation will be rapidly introduced if all the following conditions are met:

¹ These divergences would be caused mainly by pricing policies elsewhere in the economy, e.g. protection given to local industries, which may themselves have been adopted for a better distribution of income, for employment creation or for entirely different reasons. A subsidy on an agricultural input may therefore be necessary in order to achieve different objectives for various parts of the economy at the same time. On the other hand it may be a second-best solution that would be rendered unnecessary if inefficiencies or inappropriate policies elsewhere in the economy were to be corrected.
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(1) It can be clearly demonstrated that the innovation will cause an increase in output that will be large in relation to the real cost of adopting it (in terms of all resource costs, including family labour), and also that the monetary output is much larger than the monetary input.

(2) The innovation is relatively riskless, i.e. its success is not materially affected by such factors as adverse weather conditions or level of managerial competence.

(3) The innovation fits readily into the existing farming system, or the farming system can be easily adjusted to accommodate it.

(4) The purchased inputs are readily available and marketing outlets exist for the cash output resulting from the innovation.

(5) The innovation does not create a large demand on the farmer for increased fixed capital or working capital that cannot be met out of his current cash flow.

It would appear that a temporary subsidy on an input is likely to be of value only in helping to create two of the above conditions. The first case occurs where the innovation has a high risk content until some new managerial technique or husbandry expertise has been mastered. A subsidised input may then reduce the monetary cost of the risk during the learning period. On the other hand, the subsidy in its turn may reduce the farmer’s incentive to adopt the managerial techniques needed to make the innovation a success.

In this connection let us consider hybrid maize. To obtain the full benefit of this innovation, the following practices should be adopted:

(a) use of hybrid maize seed;
(b) early planting;
(c) planting at the optimum population;
(d) careful and frequent weeding;
(e) application of fertiliser at the time of planting and again during the growing stage;
(f) use of an insecticide dust against stalk borer disease.

Thus three purchased inputs (excluding labour), namely seed, fertilisers and insecticide, are required if this innovation is to be fully applied. However, the largest incremental benefits (in terms of real resource costs) derive from early planting at the optimum plant population and careful and frequent weeding. If there is surplus family labour available at the appropriate times, then much of the benefit of this innovation can be reaped without financial outlay except on the hybrid seed.

On the other hand, the use of fertiliser without early planting, or without careful weeding, will cause some increase in yield but this will not be nearly so large as when all three practices are combined. Thus, the provision of highly subsidised fertiliser to farmers might show so high a private benefit-cost ratio to the farmer that the other components of the innovation might be neglected.

Another problem in this connection relates to the assumptions to be made about the length of the learning or introductory period, and the identification of the farmers who are adopting the innovation for the first time. Taking the
hybrid maize example again, hybrid maize seed became commercially available in Kenya in 1963–64, and within two years had been adopted by virtually all big farmers. Since then its use has spread steadily throughout the small farms in the country, especially in Western Province. It is estimated that in 1972 enough seed has been sold to plant 290,000 hectares at a total cost to the farmers for seed of £750,000.

If the Government decided to subsidise hybrid maize seed by, say, 50 per cent of its cost, this would raise three kinds of problem. First, it would mean a relatively large and rising financial commitment for the Treasury. Secondly, much of the benefit would accrue to farmers already using hybrid maize, though the adoption of the innovation might be accelerated; but if the rate of acceleration was low, then the financial cost of achieving this incremental growth would be extremely large. Thirdly, there is the political problem of reducing or removing the subsidy at some stage so that it shall not permanently distort factor costs.

The second case in which a temporary subsidy on an input is likely to prove desirable occurs when a farmer’s working capital or cash flow is so limited that he is unable to finance the adoption of the innovation. In that case a subsidy may be of considerable value as a disguised form of credit. Again, the problem arises of identifying the potential innovators who are impeded by capital or cash flow limitations in order to minimise the financial cost of the scheme.

To summarise this section, taxes or subsidies on inputs could be desirable to rectify divergences in private and social costs and benefits. A temporary subsidy on an input might also accelerate the adoption of an innovation.

Income distribution

Any subsidy on an agricultural input will, by definition, have some income distribution effect; for instance, if the subsidy is financed by the Treasury then the transfer will be from taxpayers to recipients.

If we wish the distribution effect to lead towards greater income equality, then we must ensure that the recipients have a lower income than the donors, and preferably that they are in the lowest income groups. This may be difficult to achieve with a general subsidy on an input, given the wide range of income groups within the agricultural sector, but one can think of specific cases where the over-all effect would tend towards income equality: for instance, a subsidy on Katumani maize seed, used in areas of medium rainfall, where one would expect average incomes to be below the median for the economy as a whole.

An innovation may, of course, have indirect income distribution effects, and a subsidy or a tax on an input may therefore have a wider influence on income distribution than that on the fortunes of the recipient farmer. One form of this indirect effect, namely employment creation, is discussed below.

Employment creation

In this discussion, it is assumed that the “creation” and “destruction” of employment refer to changes in the number of people employed at a constant wage. The purpose is to distinguish between changes in the wage bill or
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incomes and changes that occur in the numbers employed while the wage bill remains constant. The employment of more people at a lower average wage can be termed "wage-bill-sharing employment creation".

While there would appear to be a strong case for temporary subsidies on agricultural inputs if they accelerate the introduction of an employment-creating technique or product, a permanent subsidy would be difficult to justify unless there was a continuous divergence between private and social costs that could be rectified by a subsidy on an input. An example that is just possible is some form of transport subsidy for remote areas where there is a lack of employment activities, but even here the trade-off between employment creation and the misallocation of resources would have to be considered carefully.

Similar questions arise in deciding whether a tax should be placed on inputs if their use would be employment-destroying. General grounds for supporting such a tax would exist where the private cost of labour was above its social opportunity cost or the purchased input was undervalued. The latter situation applies mainly to imported inputs when the exchange rate is held at an inappropriate level.

With regard to the former case, and in view of the largely informal nature of a large portion of the agricultural labour market and the relatively low wages paid in the organised part of the market, it is extremely unlikely that there is any significant divergence between the private and social costs of labour within the agricultural sector.

Thus, the justification for a permanent subsidy in terms of employment creation seems to be limited to a few special cases. A tax can be justified mainly if there is undervaluation of imported inputs, which can be corrected most efficiently by a general import tariff at a level equal to the over-valuation of the domestic currency.

A REVIEW OF EXISTING SUBSIDIES

When the existing policies concerning agricultural inputs are examined, one finds that no coherent policy for income generation, income distribution or employment generation exists.

Fertilisers

For instance, fertiliser subsidy schemes have been in operation since 1963. The present rate of subsidy on fertilisers is 500 sh. per long ton of water-soluble phosphate (P_2O_5) nutrient and 200 sh. per long ton of nitrogen nutrient. At 1971 prices, these subsidies had the effect of reducing the wholesale price of phosphate fertilisers by about 30 per cent and the price of nitrogenous fertilisers

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1 The existing policies concerning several agricultural inputs were recently examined in some depth in the Report of the Working Party on Agricultural Inputs, op. cit., from which much of the information in this section is derived.
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by about 10 per cent. These percentages would be slightly lower now, since the world price of fertilisers has moved up slightly in the past year.

The extent to which the subsidy has encouraged the use of fertilisers is debatable. The consumption of fertilisers was virtually static during the period 1965-68, when there was a subsidy on phosphate fertilisers only, but in both 1969 and 1970 there were dramatic increases in fertiliser imports. These increases coincided with a period when the current rates of subsidy on both phosphatic and nitrogenous fertilisers were in operation. However, other factors that have encouraged the adoption of fertilisers have been the advice of extension officers, the increased awareness of farmers of profitable uses for fertilisers, especially on higher-yielding tea and hybrid maize and wheat varieties, and the efforts by fertiliser companies to extend their own sales.

Later experience is more difficult to interpret. In the first four months of 1971 imports of fertilisers from overseas declined by 17.6 per cent compared with a similar period in 1970. Contributory factors to this decline may have been the drought or overstocking in the previous year, but it is impossible to make a detailed analysis because the information available is inadequate.

Even if the increased use of fertilisers in 1969 and 1970 is all attributed to the subsidy, the cost of the present method of encouraging farmers to use fertilisers for the first time must be very high. For instance, in 1969 the cost of the fertiliser subsidy was almost £700,000. It is difficult to believe that the whole 25 per cent increase in the consumption of fertilisers in that year was due to "new" farmers, since 80 per cent of the total use was due to large farms and estates that could be assumed to be existing users of fertilisers. When we examine the use of fertilisers on small farms we find that the major crops treated are tea, coffee, maize and pyrethrum. The "new" farmers are likely to be concentrated amongst those growing tea or hybrid maize for the first time.

The present fertiliser subsidy system cannot be commended on income equality grounds. As mentioned above, in 1969 about 80 per cent of the £700,000 subsidy accrued to large farms and estates. These numbered no more than 3,000. Even the small farmers using fertilisers are likely to be, on average, the more prosperous farmers who are growing cash crops. There is also a possibility, given the mechanics of the fertiliser subsidy system and the pricing policy of importers, that part of the subsidy actually goes to importers of fertilisers.

The use of fertilisers is likely to be, in general, employment-creating, since they increase the yield of existing crops and thereby either increase output or release land for other uses. The only case where fertilisers appear to be employment-destroying probably arises where the increased yields reduce the area of land under cultivation. While one can visualise this occurring for individual crops, e.g. coffee, given the population pressure on land and the increasing demand for foodstuffs, a general statement that the use of fertilisers is employment-destroying cannot be supported.

Even so, one has to consider what the incremental effect on employment of the £700,000 spent on fertiliser subsidies is, and whether greater employment creation could be achieved by using these funds elsewhere in the economy.

1 Statistical Digest, September 1971, p. 3.
Fuel

It is estimated that in 1969 agriculture paid £773,000 in import duty and consumption taxes on petrol, gas, oil, and to a limited extent kerosene used as fuels directly for agriculture. More than 60 per cent of this was probably paid in taxes on the fuel used in tractors. However, in 1971 the total tax on diesel oil was reduced by about 20 per cent, while that on petrol was raised. These changes in 1971 would have had the net effect of reducing the fuel taxes paid by agriculture by about 10 per cent if applied to the 1969 fuel consumption.

These taxes probably have no more than a marginal effect on the use of tractors, etc., but, with the current pattern of mechanisation, they might have a slight effect on income distribution, directly taxing the richer and larger farmers. However, this would not necessarily apply in the long run if smaller mechanised and fuel-driven implements came into wider use.

Fuel taxes also have an indirect effect on the agricultural community, since the rural sector is heavily dependent on road transport and fuel taxes therefore enter, if only slightly, into both the price the farmer receives for his produce and the price he pays for purchased agricultural inputs and other goods. These factors impinge most heavily on the farmers who are most distant from urban centres and other markets.

Artificial insemination

In 1971 an increased subsidy was introduced for the use of artificial insemination, reducing the cost to the farmer of inseminating all cattle to 1 sh. per pregnancy from 10 sh. for grade cattle and 1 sh. for unimproved cattle. The over-all cost per pregnancy in 1970 was 32.75 sh. 2 It is understood that artificial inseminations rose by about 37 per cent in 1971, suggesting that the subsidy now costs about £240,000 per annum.

There are probably two grounds for justifying this subsidy. First, the marginal cost of inseminating cattle is substantially below the average cost. The Government, in fact, is financing the fixed costs associated with providing the service. If this is correct, then, the actual size of the subsidy paid by the Government should not increase as the number of inseminations increases; as the service expands one would expect the marginal and average costs to converge, thus lowering the subsidy per pregnancy. Secondly, there is probably a divergence between private and social costs in comparing natural mating and artificial insemination, because the latter reduces the natural incidence of many breeding diseases and at the same time raises the over-all genetic potential of the cattle in the country.

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1 Report of the Working Party on Agricultural Inputs, op. cit., Chapter XII.
15. FUNCTIONS AND LEVYING OF A LAND TAX

There are three possible justifications for some form of land tax in Kenya. First, given the strong evidence that small holdings are in general much more intensively utilised than larger holdings since they have both a higher output and a higher rate of employment per hectare, then a suitable land tax is one method of encouraging either the more intensive use of land by existing farmers or the sale of land to other people, which should also lead to an intensified use of the land. Thus the basic objective in this case is increased income generation and employment creation.

Secondly, one can argue that a suitable land tax is a possible method of obtaining a more equitable distribution of land, and hence a more equitable distribution of income.

Thirdly, owing to increased population pressure in rural areas, and the expected expansion of urban areas, Kenya is entering a phase in which land values are expected to rise rapidly. There is considerable circumstantial evidence that many people are purchasing land for speculative purposes and are not unduly concerned about its short-term productivity. The attractiveness of land speculation is enhanced by the absence of any form of capital gains tax in Kenya. Thus some form of land tax might be devised as a wealth tax or capital gains tax.

In terms of a tax to apply specifically to land, it is probably most realistic to concentrate on the first objective. There are already fiscal instruments that should, in theory at least, cope with the second objective, for example progressive income tax. If we are concerned with the third objective, we should make a case for a general wealth tax or capital gains tax and not relate it specifically to land.

The general problem, then, is to design a tax that will intensify the use of the land and so increase incomes and create employment. If it also achieves some measure of equality of income and wealth, then those will be desirable side effects. However, there are many specific problems that would have to be resolved before a precise form of tax could be proposed. Some of these are discussed briefly below.

A rate of tax has to be chosen that would make it unprofitable to retain land being farmed at a level well below its productive potential but capable of yielding an adequate return to a person farming it at a level approaching its
potential. This suggests that the tax must be related to the productive potential of land. Unfortunately, the productive potential of land is a nebulous concept and notoriously difficult to measure. At a regional level it can be measured roughly in terms of rainfall, ecological zone, etc. For precise measurement in relation to an individual farm, one has to take into account such factors as soil type and slope drainage. Thus the full implementation of the tax would have to await a detailed survey of farms based on some appropriate criteria for assessing the productive potential of land. There are weaker alternatives that could be proposed. For instance, a tax could be based on expected annual rainfall, say, a sub-localational basis, with the rate of tax at a level that took account of the variable productivity of land, even within a common rainfall zone. It would still be desirable, however, to have rainfall measured at more points than is the case at present.

One problem of introducing a country-wide land tax would be the administrative problem of collection. Several methods of reducing this burden may be put forward. The first would be to exempt land below some limit of productive potential; all sub-localisations with an expected rainfall of below 750 or 850 mm, for example, might be exempted. These limits would immediately eliminate at least 80 per cent of Kenya’s land area. Within the remaining area, one might then exempt holdings below a certain size. Thus, of the 680,000 holdings in these districts where registration had been completed by the end of 1970, only 340,000, or half, would be liable for a land tax if holdings under 2 hectares in size were exempted.

One particular problem hindering the introduction of a land tax is the fact that legal ownership established through land registration exists at present for only about half the high-potential land. A land tax would have to be introduced on a selective basis in the short run, but this would not raise insuperable problems of equity. One solution would be initially to introduce the land tax only on farms above, say, 10 or 20 hectares in size. A cut-off point of this sort would avoid discouraging the mass of farmers from the adjudication of land in areas as yet unregistered. Although farmers with holdings of more than 20 hectares in areas not yet adjudicated would be treated favourably compared with others paying the land tax, it could be argued that they had already suffered by the very fact of not having legal title to their land. An arrangement of this sort is probably, therefore, the best way to introduce the tax in the early stages.

We have made only very rough estimates of the yield from a land tax. If the level of progressive tax averaged 25 sh. per hectare, the total yield at present from farms of 10 hectares or more in size would be about £1.7 million. If the tax rates averaged 40 sh. per hectare, the yield would be about £2.7 million.
16. FOREIGN INVESTMENT IN INDUSTRY

INCENTIVES AND NEGOTIATION

The Kenyan Government has encouraged foreign investment since the country achieved political independence. The Foreign Investment Protection Act of 1964 provides liberal guarantees. It gives freedom to repatriate profits (in proportion to the foreign share of the equity), interest and repayments on foreign loan capital, and also “the approved proportion of net proceeds of sale” if the enterprise should decide to withdraw part of its investment. There are also guarantees against expropriation. Entitlement to these privileges is not automatic: the company must have an “approved status certificate”, which is issued at the discretion of the Minister of Finance after evaluation and negotiation. Furthermore, while the right to repatriate profits is guaranteed, each transfer must have the approval of the Central Bank. The Central Bank’s approval is also required for other foreign payments, namely those for intermediate and raw materials, technical and management services, royalties (on brand names or patented processes) and other payments that subsidiary companies or branches make to parent companies abroad (e.g. contributions to parent company overheads, or research and development expenditures).

Under Kenyan law, “foreign companies” may be public companies incorporated in Kenya, private companies (in which case there are restrictions on the number of directors) or branches of a foreign enterprise. In all cases, the companies pay a profit tax of 40 per cent, but there are certain differences in treatment under company law. The main points are:

(1) Since 1971 there has been a withholding tax of 12.5 per cent, over and above the 40 per cent profits tax, on dividends paid by private and public companies. Branches may remit their net profits to their parent companies without paying this tax, since they do not declare dividends. Branches are, however, subject to other types of withholding tax, in common with companies registered in Kenya: these are taxes of 20 per cent on royalty payments, management fees and other technical fees. Since the 12.5 per cent withholding tax on dividends has been in operation for only a year, it is hard to say whether immunity from the tax will encourage foreign companies to set up branches rather than subsidiary companies. On the face of it, it will, unless the tax system is changed.
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There are, however, some disadvantages to the branch system. The most important is that branches do not receive government equity participation through the Industrial and Commercial Development Corporation, which, as a matter of practice rather than law, deals mainly with public companies. At present, most of the branches are in the assembly industries (vehicle assembly and consumer durables) and in export-import trade.

(2) Public and private companies are treated differently as far as distribution of profit is concerned. The income tax authorities put pressure on private companies to distribute profits. They may ask any private company that retains more than 18 per cent of its profits to justify its policy (in terms of expansion plans). The object is to prevent tax evasion: it is argued that those companies can readily find ways of using undistributed profits as directors’ income, thus evading profits tax and presumably also personal income tax. This policy conflicts with the objectives of foreign exchange control, since higher distribution of profits generally means greater repatriation. In addition, it contrasts strangely with policy on local borrowing by foreign enterprise; in recent years, the Central Bank has restricted the local borrowing rights of foreign companies that have high rates of distribution and repatriation, and this has probably encouraged a higher rate of retention.

Foreign companies benefit from a number of incentives (which benefit local companies as well). The most important are described below.

The investment deduction

The investment deduction system allows manufacturing enterprises to deduct from gross profits before tax 20 per cent of the value of new fixed assets, including buildings, in their first year. This is in addition to the normal depreciation allowance of 4 per cent on industrial buildings, 12.5 per cent on machinery and equipment and 25 per cent on self-propelled vehicles.

The deduction can be carried forward if the company makes a loss in its first few years. In some cases, quite long periods have passed (four to five years is not uncommon) before new companies have declared a profit. The effect of the deduction is equivalent to a government grant of 8 per cent of asset value (20 per cent of 40 per cent), with the profits tax at 40 per cent. It has been estimated that investment deductions had a revenue cost of about £330,000 a year in 1966 and 1967. This is more than 1 per cent of government revenue from direct taxation in those years.

It is fair to count this as the (market) cost of the investment deduction system, since the investments in question would most probably have taken place without the investment deduction. In other words, the system probably has little effect on the incentive to invest. In the first place, surveys in other countries suggest that investment deductions do little to stimulate investment. Secondly, the effect of other incentives—particularly protection—are much greater than the investment deduction. For example, duty drawbacks on imported intermediate goods and capital equipment in 1969 were equivalent to a revenue loss of about £1.3 million. This is about three times the revenue loss of investment deductions, and is only a very partial measure of the ad-
Industry and construction

Advantages of protection to private companies, since it takes no account of the effects of protection in product markets.

In brief, the net effect of investment deductions is a loss of government revenue, possibly with some small effect on capital intensity.

Protection

The main fiscal incentive to foreign investment in Kenya is to be found in the policy of import-substituting industrialisation. Effective protection is considerable for consumer goods and some intermediates. Product markets are protected by tariffs, quotas and sometimes total bans on imports; intermediates for processing are often allowed drawbacks and remissions of duty; capital goods are imported free of duty.¹ There are two particular points about protectionist policy that are immediately relevant.

(1) Individual companies wishing to invest in Kenya are able to negotiate special protection privileges for their investments. This creates one of those situations, often discussed in terms of games theory, that are common in oligopolistic world markets. Even if the tariff against the products of a particular company exporting to Kenya is low, there is always the danger that a competitor may make proposals to the Kenyan Government for an investment in Kenya and obtain increased protection. The threat of potential protection and loss of markets is probably more important than the actual level of tariffs in inducing foreign investment.

(2) The system of protection discriminates against developing the manufacture of capital goods. Among other things, this acts as a disincentive to appropriate forms of technical change.

State investments

The Industrial and Commercial Development Corporation has a policy of investing in large foreign-owned projects, with the idea of transferring its shareholdings to Kenyan citizens (though a substantial proportion of the finance it provides is loan capital).

Negotiation

A potential foreign investor usually makes an application to the Ministry of Commerce and Industry. Applications concerning small projects are dealt with fairly rapidly, but larger projects are evaluated in more detail. The evaluation is done in the Ministry of Commerce and Industry, and the results are examined by a ministerial committee which includes representatives from the Ministry of Finance and Planning, the Industrial and Commercial Development Corporation and the Development Finance Company of Kenya Ltd., and sometimes civil servants from other ministries, for example the Ministry of Agriculture.

¹ See Phelps and Wasow: Measuring protection and its effects on Kenya, op. cit.
Evaluation involves some cost-benefit analysis, but as far as we can establish projects are evaluated mainly against a list of specific criteria; there is no over-all social costing of the proposal. The implications for the distribution of income are not taken into account directly.

Negotiation appears to take two main forms. First, some proposals fail to satisfy the committee on specific criteria, or do not give enough information. They are returned with a request for revision, and there may be negotiation between the government departments and the proposer. Secondly, in some fields the authorities tell potential competitors about the application and invite them to make proposals also; multiple applications are quite frequent. Once again, however, there is no systematic use of social cost-benefit analysis to work out the critical bargaining points from the national point of view, and the ministries rely rather heavily on the data analysis presented by the applicants themselves.

Nevertheless, the ministries have considerable skill in bargaining with large foreign enterprises. One manager of a foreign company said that the Kenyans drove a hard bargain. On closer questioning he agreed that, so far as his company was concerned, the Kenyan officials might have done better if they had kept competitive tenders in negotiation for a longer period, playing off one company against another. Civil servants agreed that there were cases where they should have kept a number of applicants in play for longer before reaching a decision, but this course can be very time-consuming and involves heavy administrative activity. Within the limits of the present system, the Kenyan officials have negotiated successfully, but there is clearly room for improvement in the system. There is no reason why the Government should not play a bigger part in initiating projects and seeking tenders for them, instead of waiting for applications.

ORGANISATION AND SCALE OF FOREIGN ENTERPRISE

The financial structure of foreign enterprise is complex. There are many private companies in the estates sector that are owned by foreigners, and a number of subsidiaries of major foreign enterprises are also set up as private companies (which means that their accounts are not made public). The larger subsidiaries, particularly those that seek government equity participation, are public companies (though their shares are not necessarily quoted on the Nairobi stock exchange). In addition a number of large holding companies (some of them trading companies) have taken over local firms. With some risk of over-simplification, the structure of foreign ownership in Kenya can be analysed in the way outlined below.

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1 The main criteria appear to be local value added, employment created, the use of local materials, the introduction of new skills, foreign exchange savings, the prices of the products, the protection demanded and managerial competence.

Large agricultural estates producing for export

About 40 per cent of the coffee produced in Kenya comes from estates. About 85 to 90 per cent of the estates are owned by private companies, most of which are themselves under foreign ownership. It is not clear whether they have the approved status needed for the repatriation of profits. The larger estates are owned by public companies, and there are a number of foreign enterprises with large holdings (for example, SOCFINAF or the Mabroukie Tea and Coffee Co. Ltd., which is a subsidiary of Brooke Bond). Tea estates, which account for about 70 per cent of output, are also largely foreign-owned. Brooke Bond and the African Highlands Produce Co. Ltd., which is registered in Scotland, are the biggest owners. There are also a number of foreign-owned companies in ranching.

Manufacturing companies processing local raw materials

Much of the processing of cereals (maize and wheat) is done by locally owned companies, but foreign companies predominate in the processing of some other agricultural products (such as tea, coffee and sisal). Brooke-Bond-Liebig have established meat processing, and foreign enterprise is also important in the canning and preservation of fruit and vegetables (Kenya Canners process local pineapples, and Kenya Orchar ds Ltd. process horticultural products). Glaxo-Allenbury, Cow and Gate and Lyons Maid are important customers of Kenya Co-operative Creameries. Foreign investment predominates in the production of cement, and in that of soda ash and salt (Magadi Soda Company, a subsidiary of Imperial Chemical Industries).

Import-substituting manufacture

In recent years probably the greatest part of foreign direct investment in Kenya has been in import-substituting industries, particularly textiles, footwear and made-up clothing, assembly industries (commercial vehicles and some consumer durables) and paper and paper products.

SCALE OF FOREIGN INVESTMENT IN MANUFACTURING

It has been estimated in an UNCTAD paper¹ that private long-term inflows (i.e. share capital and long-term loans) accounted for 35 per cent of capital expenditure in manufacturing in 1966, 33 per cent in 1967 and 42 per cent in 1968. It is almost certain that the proportionate contribution of foreign capital has increased in recent years. These estimates must be regarded as very rough approximations. The UNCTAD estimate indicates the role of foreign capital—as distinct from the role of foreign enterprise—in the manufacturing economy. A more useful measure of the influence of foreign enterprise is the ratio of

manufacturing investment involving foreign capital (even though it may also include significant proportions of local capital) to total manufacturing investment. Using Herman’s data, we can calculate how much local debt and equity has been tied up in enterprises involving foreign capital. In 1967 and 1968, the local capital invested in foreign enterprise accounted for 12.5 per cent and 15 per cent respectively of total manufacturing investment. Adding these figures to the UNCTAD figure—which is admittedly a very crude procedure—suggests that in 1967 and 1968 projects involving foreign investment accounted for between 57 and 60 per cent of total manufacturing investment. These figures are a measure of the degree of foreign control in the manufacturing sector. The degree of foreign control is often a more relevant measure than the proportionate contribution to investment. It should be noted that we do not equate foreign control with participation amounting to more than 50 per cent of the equity: effective control can be and is exercised with much lower equity participation than this and, in extreme cases, it can even be exercised without equity participation at all (through licence agreements, for example).

Table 73 gives a measure of the role of foreign enterprises in gross product (which is the sum of labour costs, interest payments, depreciation on assets and stocks, and profit before tax) and in net profits before tax in 1967. It has not been possible to compile data for later years, though this could probably be done in the future. The table distinguishes between enterprises mainly or wholly owned by Kenyan citizens and those mainly or wholly owned by non-citizens. There might well be some foreign capital tied up in the former group of firms, but probably not very much. Herman’s analysis shows that local equity has been on the average considerably less than 50 per cent of the share capital of new foreign enterprises in every year since 1960 (see table 74).

Elsewhere Herman shows that the average local participation is above 50 per cent (56.7 per cent) for investments made by the Aga Khan, but under 50 per cent for all other sources of investment: local participation during the period 1960–70 was, on the average, 42.8 per cent in Japanese investments and 39.7 per cent in Indian investments—but all other sources (including the major investing countries, the United Kingdom and the United States) have less than 25 per cent of local participation on the average.

It is therefore reasonable to assume that the “foreign-owned” category in table 73 covers virtually all the production by enterprises with foreign equity participation. The table shows that these foreign enterprises accounted for 57 per cent of the gross product in 1967. The percentage is probably greater now (possibly over 65 per cent), since there have been some large foreign investments in recent years, Delmonte in the canning industry and Firestone being notable examples. The table also shows that foreign enterprises accounted for a disproportionately large share of profits (73 per cent). The share in profits is 1.28 times the share in gross product. It seemed that this might be due to the petroleum refinery, which is a very large capital-intensive project with a high absolute amount of profit before tax. However, “correcting” for the petroleum refinery alone has very little effect, merely reducing the ratio to 1.25.

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1 University of Nairobi, Institute for Development Studies: Some basic data for analysing the political economy of foreign investment in Kenya, by B. Herman, Discussion Paper No. 112 (1971).
### Table 73. Share of foreign-owned enterprises in the gross product and profits before tax of manufacturing firms employing over 50 workers, by industry, 1987

<table>
<thead>
<tr>
<th>Industry</th>
<th>Gross product (£000s) of—</th>
<th>Foreign share (percentage) of—</th>
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<tr>
<td></td>
<td>foreign-owned firms ¹</td>
<td>locally owned firms ²</td>
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<td>Meat products</td>
<td>699</td>
<td>0</td>
</tr>
<tr>
<td>Dairy products</td>
<td>925</td>
<td>0</td>
</tr>
<tr>
<td>Canned fruit and vegetables</td>
<td>123</td>
<td>111</td>
</tr>
<tr>
<td>Grain mill products</td>
<td>77</td>
<td>1,158</td>
</tr>
<tr>
<td>Bakery products</td>
<td>294</td>
<td>263</td>
</tr>
<tr>
<td>Sugar and confectionery</td>
<td>576</td>
<td>53</td>
</tr>
<tr>
<td>Miscellaneous foods</td>
<td>384</td>
<td>54</td>
</tr>
<tr>
<td>Beer, malt and tobacco</td>
<td>1,705</td>
<td>2,658</td>
</tr>
<tr>
<td>Soft drinks</td>
<td>347</td>
<td>184</td>
</tr>
<tr>
<td>Textiles</td>
<td>890</td>
<td>87</td>
</tr>
<tr>
<td>Cord, rope and twine</td>
<td>640</td>
<td>—</td>
</tr>
<tr>
<td>Footwear, clothing and made-up</td>
<td>815</td>
<td>160</td>
</tr>
<tr>
<td>textiles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sawn timber</td>
<td>492</td>
<td>322</td>
</tr>
<tr>
<td>Furniture and fixtures</td>
<td>112</td>
<td>77</td>
</tr>
<tr>
<td>Paper and paper products</td>
<td>569</td>
<td>101</td>
</tr>
<tr>
<td>Printing and publishing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leather and rubber</td>
<td>310</td>
<td>—</td>
</tr>
<tr>
<td>Basic industrial chemicals and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>petroleum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paint</td>
<td>163</td>
<td>—</td>
</tr>
<tr>
<td>Soap</td>
<td>661</td>
<td>192</td>
</tr>
<tr>
<td>Miscellaneous chemicals</td>
<td>372</td>
<td>—</td>
</tr>
<tr>
<td>Clay and glass products</td>
<td>405</td>
<td>—</td>
</tr>
<tr>
<td>Cement</td>
<td>1,791</td>
<td>—</td>
</tr>
<tr>
<td>Other non-metallic minerals</td>
<td>50</td>
<td>39</td>
</tr>
<tr>
<td>Metal products</td>
<td>1,560</td>
<td>505</td>
</tr>
<tr>
<td>Non-electrical machinery</td>
<td>259</td>
<td>225</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>60</td>
<td>1,655</td>
</tr>
<tr>
<td>Shipbuilding and ship repairs</td>
<td>382</td>
<td>222</td>
</tr>
<tr>
<td>Railway rolling stock</td>
<td>—</td>
<td>2,079</td>
</tr>
<tr>
<td>Motor vehicle bodies</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Motor vehicle repairs</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Aircraft repairs</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Miscellaneous manufactures</td>
<td>177</td>
<td>78</td>
</tr>
<tr>
<td>All industries ⁵</td>
<td>19,399</td>
<td>14,836</td>
</tr>
</tbody>
</table>

¹ Firms mainly or wholly owned by foreigners. ² Firms mainly or wholly owned by Kenyans. ³ In these sectors foreign-owned firms made losses. ⁴ In these sectors locally owned firms made losses. ⁵ Totals do not tally with sectoral data, because of problems we had in analysing some of the sectors (see below, p. 445). The totals can be taken to be reliable, however.

Source: Ministry of Finance and Planning, Statistical Division.
Employment, incomes and equality

Table 74. Domestic equity as a proportion of total equity in foreign investments in Kenya, 1960-70

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of cases</th>
<th>Average percentage of local equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>6</td>
<td>0.4</td>
</tr>
<tr>
<td>1961</td>
<td>2</td>
<td>8.0</td>
</tr>
<tr>
<td>1962</td>
<td>2</td>
<td>15.0</td>
</tr>
<tr>
<td>1963</td>
<td>4</td>
<td>38.9</td>
</tr>
<tr>
<td>1964</td>
<td>8</td>
<td>23.0</td>
</tr>
<tr>
<td>1965</td>
<td>13</td>
<td>18.4</td>
</tr>
<tr>
<td>1966</td>
<td>15</td>
<td>30.0</td>
</tr>
<tr>
<td>1967</td>
<td>10</td>
<td>32.8</td>
</tr>
<tr>
<td>1968</td>
<td>9</td>
<td>24.1</td>
</tr>
<tr>
<td>1969</td>
<td>4</td>
<td>12.5</td>
</tr>
<tr>
<td>1970</td>
<td>5</td>
<td>24.9</td>
</tr>
</tbody>
</table>

Source: B. Herman, op. cit., table VI, pp. 18-19.

Table 75. Aggregate share of foreign-owned enterprises in the gross product and profits before tax of manufacturing firms employing over 50 workers, 1967

<table>
<thead>
<tr>
<th>Sectors of manufacturing</th>
<th>(1) Percentage of gross product</th>
<th>(2) Percentage of profits before tax</th>
<th>(3) Ratio of (2) to (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All sectors</td>
<td>57</td>
<td>73</td>
<td>1.28</td>
</tr>
<tr>
<td>Sectors in which there are both foreign and local enterprises</td>
<td>47</td>
<td>44.6</td>
<td>0.95</td>
</tr>
<tr>
<td>Idem, but without the canned fruit and vegetables sector</td>
<td>47</td>
<td>46.6</td>
<td>0.99</td>
</tr>
</tbody>
</table>

Source: see table 73.

There might be several explanations for the aggregate data. For example, they are consistent with the notion that foreign enterprise is on the average more capital-intensive than local enterprise. High capital intensity could account for the relatively high proportion of profits in value added that the aggregated data imply, without necessarily suggesting a disproportionately high ratio of surplus for foreign enterprises. Alternatively, the explanation may be that the foreign enterprises are simply better at product differentiation and marketing and have monopolistic advantages.

Table 75 suggests a somewhat simpler explanation. The table compares the shares of foreign enterprises in gross product and profits for the whole manufacturing sector with two estimates of the foreign share in gross product and profits for the branches of manufacturing in which there are both locally owned and foreign-owned enterprises.
The method of estimation must be explained. The basic problem is to make comparisons between foreign and local enterprises producing the same products. Obviously, perfection is impossible with the data available (i.e. the data in table 73, which are mainly three-digit ISIC\textsuperscript{1} data, aggregated into larger groups in some cases). However, we have been able to make some adjustments to the data in table 73 by consulting the Register of Manufacturing Firms, 1970, of the statistics division of the Ministry of Finance and Planning, which gives reasonably detailed information on the products manufactured by individual firms in the sector. As a result, we have made the following adjustments in order to arrive at the data in table 75:

(1) The “sugar and confectionery” industry in table 73 has been left out even though there are both foreign and local enterprises in it. The reason is that it is composed of two three-digit groups, 207 and 208, and that group 207 contains sugar factories, which are all foreign, while group 208 contains firms manufacturing “cocoa, chocolate and sugar confectionery”, which are all local. A foreign-local comparison within the group would be highly misleading, since the two types of firms are producing very different products.

(2) The “beer, malt and tobacco” industry in table 73 contains one large foreign enterprise in the tobacco section (ISIC 220), which has a marked effect on the comparison within the industry (being relatively capital-intensive). There are no local firms in this size range manufacturing tobacco. Consequently the data on group 220 have been left out of the estimates in table 75.

(3) Similarly, the composite “footwear, clothing and made-up textiles” industry group in table 73 includes a large foreign footwear manufacturer but no local footwear companies (group 241). The data on group 241 have been left out of table 75, since footwear manufacture obviously involves a different technology from that of “clothing and made-up textiles”.

(4) A final point about table 75 relates to the sets of estimates in the second and third lines. The second includes all three-digit industrial groups in which there are both foreign and local enterprises; in the third the “canned fruit and vegetables” industry is left out. The reason for this is that in 1967 the canned fruit and vegetables industry, or at least the foreign-owned part, was in considerable difficulties. These may be regarded as unusual, and they have since been overcome. The rather special character of this situation seemed to require an alternative estimate.

It turns out that in the sectors in which there are both foreign-owned and local firms the foreign shares in profits and in gross product are about the same. This is consistent with the argument that in those sectors foreign-owned and local enterprises have about the same level of capital intensity on the average. We shall look at this question in more detail in a moment.

Even the figures in the second and third lines are, of course, broad aggregates: a glance at the data for individual industries shows that there is considerable variation, though probably not enough to destroy the significance of the conclusion. But the data suggest that the disproportion between share in profits and share in gross product is mainly accounted for by foreign pro-

\textsuperscript{1}International Standard Industrial Classification of All Economic Activities (of the United Nations).
Employment, incomes and equality

jects in sectors where there are no local firms. In turn, this would suggest two possible explanations. Those sectors may be very capital-intensive anyway, which is obviously true of petroleum refining and cement manufacture, and probably true of paint manufacture and the production of miscellaneous chemicals, two branches of manufacturing that account for a good deal of the gross product in those sectors. Alternatively, the foreign-owned enterprises may have highly oligopolistic market conditions in some of those sectors, mainly owing to high levels of effective protection.

The analysis by Phelps and Wasow shows that effective protection is relatively high in some of the sectors where foreign enterprise is predominant (i.e. where it accounts for 100 per cent of the gross product for firms with over 50 employees). Sugar (effective protection 172.9 per cent), “cord, rope and twine” (82.9 per cent), “miscellaneous chemicals” (29.9 per cent) and “clay and glass products” (28.9 per cent) rank in the first 16 three-digit groups in terms of effective protection (Phelps and Wasow rank 37 groups in all).

The main general conclusion from the analysis is, however, fairly obvious. Foreign enterprise controls a very large part of the gross product and, more important, an even larger part of the surplus in the manufacturing sector. In our view, the proportionate importance of foreign enterprise has increased in both respects in recent years.

In terms of distribution by industry, foreign-controlled production is greatest in petroleum refining, tobacco, cement, metal products (mainly production of cans), and textiles. Foreign production is predominant in a number of consumer goods sectors where brand names and product differentiation are important sources of competitive advantage—tobacco, textiles, miscellaneous foods (particularly baby foods and prepared cereals), footwear and clothing, paint, soap and miscellaneous chemicals (such items as printing inks, household polishes, cosmetics and toiletries, “miscellaneous drugs and tonics”, and pharmaceutical products, including patent medicines). In these industries gross production by foreign firms accounts for more than 75 per cent of total gross production in Kenya; they account for about 30 per cent of all gross production by foreign-owned firms.

FACTOR UTILISATION IN FOREIGN-OWNED AND LOCALLY OWNED FIRMS

Manufacturing is inherently capital-intensive. Our estimate is that the capital stock per worker in manufacturing is about £2,000. Although this is a very rough figure, it accords quite well with data we collected in visits to

1 Measuring protection and its effects on Kenya, op. cit.
2 This is based on depreciation data. The following assumptions were made:
   (1) Assets are distributed in the same proportion as gross investment between buildings, transport and plant and machinery.
   (2) The full rate of depreciation is applied to each category.
   (3) The average age of industrial buildings is fifteen years; the average age of company transport is five years.

On this basis, we calculate the K/L ratio for manufacturing as a whole, assuming different average ages for plant and equipment. If the average age of plant equipment is ten
eight large foreign-owned enterprises. Rough estimates of fixed assets (at initial cost) per worker were: textiles, £850 to £950; metal products (can making), £2,500; cord, twine, bags, £500; tyres, £23,000; assembly industries, £900. Obviously K/L ratios vary enormously between branches: for example, in petroleum refining and in tyre manufacture they may be 10 to 15 times the average figure. Given the nature of some recent investments—particularly that of the tyre company—we suspect that the K/L ratio for manufacturing has increased in recent years. The average figure (for what it is worth) indicates that capital per worker is about one-third less in Kenya than in the United Kingdom. The figure for manufacturing may be compared with a rough estimate that capital available per worker in Kenya—assuming a 20-year life for assets and a local participation rate of 0.7—was £354 in 1969; at 100 per cent participation, capital available per worker is £247—or 12 per cent of the estimated rates of capital per worker in manufacturing industry.

Table 76 gives some ratios which we shall use to discuss capital intensity in the manufacturing sector in 1967. We shall use depreciation per worker and gross product per worker as rough indicators. Both have obvious deficiencies, but in the absence of data on capital stock there is no choice in the matter. There is a rather poor correlation between sectors with regard to depreciation per worker and gross product per worker. We shall, however, be using the data mainly to compare the capital intensities of foreign and local large firms within the same sectors. The table shows that within sectors the relation between depreciation per worker and gross product per worker is not too bad. There are 18 sectors in table 76 in which both local and foreign enterprises are operating, and in 14 of them comparisons between foreign and local firms with regard to depreciation per worker gives results that tally with those of comparisons with regard to gross product per worker. Moreover, one of the anomalous cases is “sugar and confectionery”, where the comparison is illusory anyway for reasons explained in the previous section.

The first point to emerge from the table is that on the whole, foreign firms appear to be more capital-intensive than local ones. Depreciation per worker is higher in foreign firms (£80 compared with £60 for local enterprises). This is confirmed by comparisons of gross product per worker: in foreign firms it is £720, while in local firms it is £590. The share of labour in value added is lower in foreign firms (47 per cent) than in local ones (68 per cent). This relatively small share is partly accounted for by the lower labour cost per employee in foreign than in locally owned firms.

The comparison of these aggregates is potentially misleading and hides some important features. Table 77 has been drawn up by comparing data for sectors in which both foreign and locally owned enterprises participate. Like table 75, table 77 is based on table 73.

The following inferences are suggested by table 77:

1. Foreign enterprise is a good deal less capital-intensive in these sectors than it is on the average. Average depreciation per worker for manufacturing as a whole is £84; in sectors where there are both foreign and locally owned enterprises, depreciation per worker in the former amounts to £54 or £58. In
### Table 76. Technical characteristics of foreign-owned and locally owned manufacturing firms employing over 50 workers, by industry, 1967

<table>
<thead>
<tr>
<th>Industry</th>
<th>Labour cost per worker (£)</th>
<th>Gross product per worker (£)</th>
<th>Share of labour in value added (percentage)</th>
<th>Depreciation cost per worker (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F¹</td>
<td>L²</td>
<td>F¹</td>
<td>L²</td>
</tr>
<tr>
<td>Meat products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canned fruit and vegetables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain mill products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bakery products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar and confectionery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous foods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beer, malt and tobacco</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft drinks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cord, rope and twine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Footwear, clothing and made-up  textiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sawn timber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furniture and fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper and paper products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Printing and publishing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leather and rubber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic industrial chemicals and  petroleum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paint</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soap</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous chemicals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clay and glass products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other non-metallic minerals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-electrical machinery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical machinery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipbuilding and ship repairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Railway rolling stock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicle bodies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicle repairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft repairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous manufactures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ F: firms mainly or wholly owned by foreigners. ² L: firms mainly or wholly owned by Kenyans.

Source: see table 73.
Industry and construction

Table 77. Technical characteristics of foreign-owned and locally owned manufacturing firms employing over 50 workers, 1967 (£ per employee)

<table>
<thead>
<tr>
<th>Sectors of manufacturing</th>
<th>Labour cost</th>
<th>Depreciation</th>
<th>Gross product</th>
</tr>
</thead>
<tbody>
<tr>
<td>All sectors:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign</td>
<td>340</td>
<td>84</td>
<td>720</td>
</tr>
<tr>
<td>Local</td>
<td>402</td>
<td>60</td>
<td>590</td>
</tr>
<tr>
<td>Sectors in which there are both foreign and local enterprises:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign</td>
<td>282</td>
<td>54</td>
<td>498</td>
</tr>
<tr>
<td>Local</td>
<td>381</td>
<td>59</td>
<td>724</td>
</tr>
<tr>
<td>Idem, but without the canned fruit and vegetables sector:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign</td>
<td>299</td>
<td>58</td>
<td>543</td>
</tr>
<tr>
<td>Local</td>
<td>381</td>
<td>59</td>
<td>728</td>
</tr>
</tbody>
</table>

other words depreciation per worker by foreign firms in sectors where foreign and locally owned enterprises employing 50 or more workers co-exist is about 65 to 70 per cent of the average depreciation per worker by foreign firms in manufacturing. Similarly, gross product per worker in foreign firms in these sectors is about 70 to 75 per cent of the gross product per worker in foreign firms in manufacturing as a whole.

(2) In sectors where foreign and locally owned enterprises co-exist, foreign enterprises are less capital-intensive than locally owned firms. In those sectors depreciation per worker is lower for foreign firms than for the locally owned ones, although the difference is almost certainly insignificant if the canned fruit and vegetables industry is excluded. The data on gross product per employee give considerable support to this: gross product per employee in foreign firms is about 25 to 30 per cent lower than in locally owned firms.

(3) Foreign-owned firms have much lower labour costs per employee than locally owned ones. This holds both for the manufacturing sector as a whole and for branches of manufacturing where there are both foreign and locally owned firms.

These results lead to two main conclusions. First, foreign firms predominate (i.e. account for 100 per cent of the production of firms with over 50 employees) in inherently capital-intensive sectors. This is obvious in petroleum refining which is included in the totals in table 76 but not in the branch-by-branch analysis, sugar factories, paint, miscellaneous chemicals (we described the items of foreign-controlled production in that sector in the previous section), tobacco and cement.

However, if we are correct in arguing that foreign enterprise has an increasing share of manufacturing investment and gross product, and if the share is increasing in sectors where there are both foreign and locally owned firms, the depreciation data would over-state the capital-intensity of foreign firms, because the average age of their assets would be less than that of locally owned firms.

---

1 However, if we are correct in arguing that foreign enterprise has an increasing share of manufacturing investment and gross product, and if the share is increasing in sectors where there are both foreign and locally owned firms, the depreciation data would over-state the capital-intensity of foreign firms, because the average age of their assets would be less than that of locally owned firms.
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Secondly, and in contrast to earlier expectations, foreign enterprise seems to be less capital-intensive than local enterprise in sectors where there are both kinds of company. This can be seen both in the ratios of depreciation per worker and in gross product per worker. Gross product per worker in foreign enterprise might be depressed slightly by the transfer pricing of imported intermediates, but this cannot account for the considerable differences between foreign-owned and locally owned enterprises in that respect.¹

The data on depreciation per worker and gross product per worker, together with the fact that foreign enterprise has a lower labour cost per employee than has locally owned enterprise, suggest a plausible hypothesis to explain these somewhat unexpected results. This is that foreign enterprises have more skilled supervisory staff, and that this allows them to use production techniques which use low-cost unskilled labour. Local firms may be relatively deficient in technical supervision, so that they have to rely more on operative skills and machine pacing, which requires a shift to more capital-intensive techniques with higher labour productivity.

This pattern holds for a large number of the sectors in which both foreign and locally owned companies operate, notably grain milling, bakery products, clothing and made-up textiles (including footwear), beer and malt (but not tobacco), furniture, paper and paper products, non-electrical machinery and miscellaneous manufactures.

The pattern does not hold in some other sectors. This does not necessarily contradict the hypothesis in all cases. In miscellaneous foods and in other non-metallic minerals, the relatively high labour costs and productivity of foreign enterprises may be accounted for by the fact that their products are different from those of locally owned firms. This could also be true of metal products, where one large foreign enterprise is making cans on a production line, while local enterprise is mainly concerned with sheet metal products. However, the hypothesis clearly does not hold in the sawn timber industry. It breaks down also in soft drinks and soap; in both these sectors the foreign part of gross production is accounted for by international companies with relatively large-scale production and powerful brand name advantages.

The labour intensity and the responsiveness to relative factor prices of foreign production in Kenya were confirmed impressionistically by visits to enterprises, although those visits did not provide data making it possible to compare foreign-owned with locally owned enterprises. The eight firms we visited were using more labour-intensive methods than they would have used in their home countries. Sometimes this was ascribed to the inefficiency of the labour. A textile firm required one operative for 16 automatic looms and stated that the ratio would be 1 to 30 in its home country; another textile enterprise required one operative for four semi-automatic looms, as against the home country ratio of 1 to 12 or 15. A firm manufacturing cans used about 30 per cent more labour per unit of output than it would in its home country, and ascribed some of the difference to lower labour efficiency. As noted in Chapter 9, however, there were a number of cases of labour-capital substitution.

¹ Also, the lower labour costs per worker in the foreign companies account for only part of the difference in gross product per worker between foreign-owned and locally owned enterprises.
An important constraint on greater labour intensity arises from capital-intensive technical change. There are a number of situations in which even though an “efficient” labour-intensive alternative exists it is not used at prevailing wage rates because its labour productivity is simply too low for it to compete. For example, our case study on can production shows that automatic sealing and automatic packaging have a great cost advantage over semi-automatic methods, although in both bases the semi-automatic method is “efficient”. We suspect that capital-intensive technical advance accounts for the high capital intensity of foreign enterprise that we have noted in industries like soft drinks and soap manufacture, in which the firms have probably been able to capture sufficient markets through brand name and advertising methods of market control to enable them to meet the scale requirements of automated production lines.

A second limitation is the shortage of supervisory skills. For example, the reason why can sealing has higher unit costs by semi-automatic than by automatic methods lies in the unit costs of supervisory labour required. The need for supervisory labour as a means to labour intensity was emphasised in all the firms we visited. There are, however, two points about supervisory labour that need to be kept in mind:

(1) Supervision in manufacturing industries seems to be a substitute for skills. Semi-automatic methods of production like semi-automatic printing or can-sealing can be used either by skilled workers with very little supervision or by unskilled workers with much supervision. We argue that it is the possibility of substituting supervision for skills that accounts for the greater labour intensity of foreign large-scale enterprises, though even the foreign-owned firms regard the shortage of supervision as a major limitation on labour-intensive production.

(2) It follows that firms will not always shift to more capital-intensive methods because of lack of supervision—even though we argue that they normally do so. Sometimes a labour-intensive alternative may be available that requires little skill from the worker, and hence very little supervision.

Finally, the need to carry very large stocks of materials, because of the large quantities of imported materials used in production and the irregularity and unreliability of deliveries, seems to be a constraint on increasing labour intensity. One firm mentioned in addition that since import licenses take a long time to obtain, it has to carry much larger stocks than it otherwise would. This particular firm imported about 50 per cent of its output value.

In short, our analysis suggests that foreign firms are probably more labour-intensive than locally owned ones in similar sectors: although they are short of supervisors, they can recruit them more easily than locally owned firms (and possibly use their supervisors more productively, through better management). At the same time, foreign firms account for the whole of gross production in some inherently capital-intensive sectors. There are also signs that capital-intensive technical change is affecting the manufacturing sector, and particularly that some large foreign enterprises with brand name advantages have been able to capture and create enough of a market to make

1 Technical Paper 7.
use of very capital-intensive, large-scale methods. We should expect a trend in this direction.

Finally, it is worth while noting that if our analysis is correct, it implies that foreign enterprises generally have a much higher rate of surplus than locally owned ones. It will be recalled that in the sector where both kinds of firms operate, the foreign share in profits is about the same as the foreign share in gross product (table 75). However, since we have now argued that in these sectors the foreign enterprises have lower $K/L$ ratios than local ones, it follows that we must expect them to have a higher rate of profit on investment. This is particularly true of grain-milling and bakery products, where foreign firms have a proportionally higher share of profits than of production (see table 73) in spite of being more labour-intensive than locally owned firms.

ACCESS TO LOCAL RESOURCES

Recently the local borrowing rights of foreign companies have been restricted to 20 per cent of their (foreign) equity contribution. They may negotiate to increase this proportion up to 40 per cent in particular circumstances, though it is not clear how far they have done so. Moreover, it appears that this limitation applies to private local borrowing only, and does not include loans from public institutions like the Industrial and Commercial Development Corporation, which in some years have been greater than the foreign equity brought in by the enterprises. Table 78 below shows various sources of finance acceptable to foreign companies. It does not include retained profits of the foreign companies and it therefore underestimates the local private borrowing rights and overstates their influence on loans very considerably.

Foreign enterprises are entitled to issue shares on the local stock exchange with the approval of the Capital Issues Committee (which must also give its permission for the issue of bonus shares and the capitalisation of retained profits).

Table 78 is incomplete, because it excludes retained earnings, which would increase both the foreign and the domestic equity contributions. It does, how-

<table>
<thead>
<tr>
<th>Year</th>
<th>Foreign capital</th>
<th>Domestic capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Share capital</td>
<td>Loans</td>
</tr>
<tr>
<td>1964</td>
<td>334</td>
<td>55</td>
</tr>
<tr>
<td>1965</td>
<td>865</td>
<td>580</td>
</tr>
<tr>
<td>1966</td>
<td>707</td>
<td>2,900</td>
</tr>
<tr>
<td>1967</td>
<td>703</td>
<td>107</td>
</tr>
<tr>
<td>1968</td>
<td>608</td>
<td>20</td>
</tr>
<tr>
<td>1969</td>
<td>53</td>
<td>—</td>
</tr>
</tbody>
</table>

1 Excluding reinvestment out of profits.

Source: B. Herman, op. cit.

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ever, give some idea of the scale of local resources associated with foreign companies in the manufacturing sector. We now calculate what proportion domestic capital invested in foreign-owned enterprises bore to total manufacturing investment over the years from 1964 to 1970. Once again, retained profits earned on local equity holdings in foreign companies are excluded, so that the data understate the local contribution to foreign investment. The figures are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>5</td>
</tr>
<tr>
<td>1965</td>
<td>13</td>
</tr>
<tr>
<td>1966</td>
<td>43</td>
</tr>
<tr>
<td>1967</td>
<td>13</td>
</tr>
<tr>
<td>1968</td>
<td>15</td>
</tr>
<tr>
<td>1969</td>
<td>1</td>
</tr>
<tr>
<td>1970</td>
<td>17</td>
</tr>
</tbody>
</table>

The average for the years 1964 to 1970 inclusive was 15.3 per cent. If we assume that the UNCTAD estimate that about 45 per cent of manufacturing investment is financed from abroad applies to the whole period 1964-70, this would imply that about 30 per cent of all local private and public capital invested in manufacturing over this period went into foreign-owned companies.

REPATRIATION OF POTENTIAL SURPLUS

The question of repatriated resources is one of the more sensitive issues in connection with foreign investment. Foreign companies in Kenya repatriate profits with complete freedom under the law, though they require Central Bank permission to do so. They have, however, been under some pressure to retain and reinvest a larger proportion of profits than in the past: the exchange control authorities and the Capital Issues Committee have followed a policy of restricting the local borrowing rights of companies that have a particularly high rate of repatriation. This has led foreign companies to hold back a higher proportion of profits earned on their capital in Kenya, and accounts for their relatively high retention ratios (retained profits to total profits) in Kenya. Together with the continuing high rate of inflow of foreign capital, the disincentives to repatriate have also kept outflows of dividends from exceeding the inflow of new capital, though not by very much.

Transfer accounting

It is, however, widely accepted that the repatriation of profits is often an inadequate measure of the total resources transferred by foreign enterprises, particularly in the manufacturing sector. Generally speaking, foreign-owned enterprises are in a position to use a number of accounting procedures falling

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1 On the basis of B. Herman, op. cit.
under the heading of transfer accounting that enable them to maximise profits (by minimising their tax commitments) over the whole of their international operations, by moving resources from one country to another. The amounts involved are obviously very hard to ascertain, but the existence of these procedures is widely acknowledged, frequently by the parent companies themselves. Although it is very difficult to quantify their effects in Kenya, we feel that any discussion of the role of foreign enterprise in the manufacturing economy would be incomplete, and naive, if it did not include some analysis of the problem, the more particularly because Kenyan officials are well aware of it, even though they find these operations extraordinarily difficult to control.

Transfer pricing

The transfer pricing of imports and exports is one of the more widely discussed of the practices in question. An import-substituting foreign company operating in a well protected market (in which it usually has a considerable monopolistic advantage because of its brand name) can reduce its value added in Kenya, and its commitment to Kenyan profits tax, by over-invoicing the intermediate goods it imports from its parent enterprise. Foreign companies that process Kenyan raw materials for export can achieve the same objectives by selling their products to their parent companies at reduced prices.

We have very little evidence of the latter practice, namely the under-pricing of exports, but there is some evidence that the over-invoicing of intermediate imports is practised in some import-substituting firms. In other words, a number of these firms are thought to pay their parent companies more for the intermediate goods they import for their processing than could be obtained for those goods on the open market in the industrialised countries. This is easy enough to achieve between a parent company (which may, and often does, operate through a tax haven) and a subsidiary but it need not be confined to parent-subsidiary operations. A similar transfer of resources can be arranged between companies operating in Kenya and supplying companies that may not be connected with them by ownership, and Kenyan-owned manufacturing and trading enterprises are also able to transfer resources abroad in this way. The Kenyan exchange control authorities suggest that these practices are prevalent, though they are only occasionally able to prove it. A number of foreign companies that have made losses consistently over periods of four or five years are suspected of transfer pricing intermediates and accumulating profits outside Kenya. We were told of cases where there was evidence of over-pricing by 20 or 30 per cent; in other words some intermediate goods were being priced at 20 to 30 per cent more than they would fetch on open markets.

If it becomes prevalent, this type of transfer pricing can have a particularly marked effect on an economy like that of Kenya, where imported intermediates comprise a very large part of gross output in the manufacturing economy. It

1 A number of empirical studies on this question have now been made, particularly in relation to import-substituting Latin American economies. A number of studies on the Andean Pact countries will shortly be published, including an excellent study on Colombia—C. Vaitos: Transfer of resources and preservation of monopoly rents, Harvard Development Advisory Service, Dubrovnik Conference, 1971 (mimeographed).
Industry and construction

Table 79. Outflows of resources due to transfer pricing as multiples of profits actually repatriated, 1968–69

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate of over-pricing assumed</th>
<th>1 per cent</th>
<th>5 per cent</th>
<th>10 per cent</th>
<th>20 per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968</td>
<td></td>
<td>1.38</td>
<td>2.90</td>
<td>4.42</td>
<td>7.45</td>
</tr>
<tr>
<td>1969</td>
<td></td>
<td>1.19</td>
<td>2.05</td>
<td>2.88</td>
<td>4.58</td>
</tr>
</tbody>
</table>

Notes on assumptions:

(1) Intermediate goods used in manufacturing are taken from the intermediate goods column in table 70 (e) and (f) of the Kenya Statistical abstract, 1971. We use total imports of intermediate goods less water and electricity, other services and intermediate goods that are direct inputs to agriculture, such as manufactured fertilisers, insecticides, fungicides and disinfectants (from table 61 (a)). The remaining imported intermediates are assumed to be inputs to the manufacturing sector.

(2) It is assumed that foreign companies use imported intermediates in proportion to their share in gross product, namely 57 per cent. This is almost certainly a low estimate, but it is the basis for calculating intermediate imports by foreign enterprises.

(3) The hypothetical over-pricing is calculated on the assumptions that the intermediates imported by foreign enterprise are overpriced by 1 per cent, 5 per cent, 10 per cent and 20 per cent on the average for all industries. The data obtained are treated as an untaxed outflow of resources from Kenya.

(4) Repatriation of profits is estimated on the following assumptions:
   (a) that 45 per cent of profits before tax in manufacturing are returns to foreign equity (this is based on the UNCTAD estimate);
   (b) that the average retention (converse of repatriation ratio) applies to repatriation out of profits after tax in the manufacturing sector. Hence we assume 35 per cent repatriation after tax in 1968 and 46 per cent in 1969.

requires only very small over-pricing ratios to bring about transfers of resources which can, since they are untaxed, constitute a very large proportionate addition to the resources transferred through the repatriation of profits. Table 79, which is hypothetical, shows how sensitive the transfer of potential surplus in Kenya can be to small over-pricing ratios. For example, if the average over-pricing ratios for all intermediates imported into the manufacturing sector had been as low as 5 per cent, the total outflow of resources (i.e. potential surplus) would have been 2.9 times as great as profits actually repatriated in 1968 and 2.05 times as great in 1969. (The large difference is due to the large increase in the profits retention ratio between 1968 and 1969.) If over-pricing amounted to 10 per cent on the average, the outflow of surplus would have been 4.4 times as great as profits expatriated in 1968 and 2.9 times as great in 1969. From our discussions in Kenya with officials and industrialists we think that an over-pricing ratio of 5 per cent is low. In other words, over-invoicing of intermediate goods probably more than doubles the real outflow of surplus from the manufacturing sector as compared with the outflow of profits and dividends.

Service payments

The transfer pricing of intermediate goods is not the only way in which surpluses can be transferred free of tax. Kenyan exchange control regulations are extremely liberal about various kinds of service payments between subsidiary companies and parents. For example, a company may pay a royalty of 5 per cent on total sales to its parent enterprise simply for the right to use a brand name; and in addition it may make payments for technical services.
rendered by the parent company, contributions to headquarters overhead expenses, contributions to headquarters research and development expenditures, and management fees.

Compared with that of many other developing countries, this is a very easy-going system: for example, in many countries royalty payments are not allowed between subsidiary and parent companies, or if they are allowed they must involve a real exchange of proprietary process technology, not mere brand names, and 5 per cent is a fairly common maximum level for this kind of (technically substantive) royalty. Moreover, it happens quite often in other developing countries that a subsidiary enterprise paying a royalty fee is not allowed to make additional payments for research and development, technical services or management; or to contribute to headquarters overheads. In Kenya a single company can make payments under all these accountancy headings simultaneously, and a number do so. Quite often these payments can exceed repatriated profits by large amounts: we were told of companies whose technical fees to headquarters consistently exceed total profits and expatriated profits year after year.

It is, of course, extremely difficult to ascertain whether these types of payment are a return to the parent enterprise for a real service or whether they are simply transfers. Some officials in Kenya are obviously concerned about the real nature of these payments, and the mere fact that there appears to be some duplication of payments, because of the multiple headings that are used, suggests that there may be an element of transfer payment involved.

A sample of ten foreign-owned enterprises made the following remittances abroad in 1971: £310,000 for dividends; £136,000 for management fees; £34,000 for technical services and consultations; £36,000 for royalties. Non-dividend payments are 67 per cent of dividend payments, and 40 per cent of total remittances. It would be absurd to claim that all non-dividend payments were pure transfers. Parts of them are obviously real payments for real services. Five of the ten companies made no dividend payments abroad, and these companies account for 45 per cent of all non-dividend payments.

Other practices

Finally there are some other practices that call for close examination. One is the practice of contributing equity in the form of know-how and charging a royalty on sales for technology at the same time. This type of accounting is now forbidden in many developing countries. Even more questionable is the practice of accounting expenses incurred prior to investment (i.e. expenses incurred at home long before investment in Kenya) as part of the equity contribution of the company. These practices allow the enterprise to appropriate a larger proportion of total profits (compared with that of local shareholders) without additional financial commitment.

Surplus transfer and reinvestment

To summarise, foreign companies have a great deal of room to manoeuvre in transferring untaxed surpluses and surpluses taxed at half the rate of profits tax out of Kenya. We consider that the amount of surplus transferred in the form of dividends after taxation might be less than half the total surplus trans-
ferred by foreign enterprises in the manufacturing sector. The particular manner in which these additional transfers are carried out makes nonsense of the regulation that the amount remitted after tax must be proportionate to the foreign share in equity capital. Foreign enterprise is in a position to transfer surplus that would otherwise have accrued to the Government or to private shareholders in Kenya itself—and to do so on a substantial scale.

These various possibilities of transferring surplus are important in relation to the problem of choice of techniques and industrial employment. The usual justification for capital-intensive technologies is that they often give higher reinvestible surpluses and so increase output and employment, even if their short-term employment effects are small. If, however, the surplus leaves the country not only through the repatriation of profits but also in the various other ways we have discussed, that argument might lose its validity. It is therefore important to take these problems into account in an employment strategy.

We must emphasise that the data available on the question of repatriation of surplus in Kenya is very scanty indeed—too scanty to permit firm conclusions about what is happening. It is nevertheless essential to discuss the point. For one thing, it is increasingly a matter of concern in Kenya itself; for another, there is some solid evidence that this kind of practice has been quite common in other highly protected economies, and there is no particular reason why Kenya should be an exception. Obviously, this is a matter for high priority in future research, for those responsible for the Kenyan economy must have the information enabling them to verify as far as possible the practices of large foreign enterprises.
17. THE CONTROL OF PROFITS

Some method of controlling profits is essential, for the following three reasons:

(1) It is an essential condition if a wages policy is to be acceptable, and hence workable.

(2) It is necessary to prevent a successful wages policy from leading to a shift in the distribution of the national income to the advantage of the richest (share-holding) classes.

(3) It is necessary to prevent such a policy from leading to a greater outflow of profits. This reason is particularly important in Kenya, where foreign-owned profits form a substantial proportion of the total (probably at least half). If profits are all domestically owned the ill-effects of an increase in the share of profits in the national income may be countered by progressive taxation. This is not the case for foreign-owned profits, in respect of which an increased outflow also involves a loss of foreign exchange.

In Kenya, as compared with many developed countries, wages form a low proportion of the gross domestic product, and profits a high proportion (table 80). Over-all, between 1964 and 1970, the wage bill in the modern sector accounted for between 42 and 46 per cent of monetary gross domestic product (see table 82, column (1)). The operating surplus (which includes income from self-employment) varied between about 38 and 40 per cent of monetary gross domestic product in the same period, as table 81 shows.

However, the relatively low share of wages was in part due to the low share in agriculture, where average wages are around 37 per cent of the gross domestic product. In the rest of the modern sector wages account for about 50 per cent of the gross domestic product (see column (2) of table 82).

It seems to be widely believed that wages have been falling and profits rising as a proportion of income. Thus it is argued in paragraph 78 of the report of the Ndegwa Commission that “the decrease in the wage bill as a percentage of gross domestic product shows that the increase of average wages has not consumed the profits of the modern sector”. However, closer examination of the figures suggests that this is by no means conclusively established. The over-all picture appears to be more complex than this.
### Employment, incomes and equality

#### Table 80. Shares in the gross domestic product, 1964 and 1966–70 (Percentages)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities outside the monetary economy</td>
<td>27.0</td>
<td>26.6</td>
<td>26.6</td>
<td>24.8</td>
<td>24.0</td>
<td>23.2</td>
</tr>
<tr>
<td>Remuneration of employees</td>
<td>40.0</td>
<td>40.2</td>
<td>41.4</td>
<td>43.2</td>
<td>42.6</td>
<td>43.0</td>
</tr>
<tr>
<td>Rental surplus</td>
<td>4.1</td>
<td>3.7</td>
<td>3.6</td>
<td>3.4</td>
<td>3.4</td>
<td>3.3</td>
</tr>
<tr>
<td>Other operating surplus</td>
<td>28.9</td>
<td>29.5</td>
<td>28.4</td>
<td>28.6</td>
<td>30.0</td>
<td>30.5</td>
</tr>
<tr>
<td>Total gross domestic product</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source: Economic survey, 1971.*

#### Table 81. Ratio of shares in the gross domestic product, 1964 and 1966–70

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Remuneration of employees to monetary gross domestic product</td>
<td>54.8</td>
<td>54.8</td>
<td>56.4</td>
<td>57.4</td>
<td>56.1</td>
<td>56.0</td>
</tr>
<tr>
<td>Remuneration of employees to total operating surplus</td>
<td>138.4</td>
<td>136.1</td>
<td>145.7</td>
<td>150.9</td>
<td>142.0</td>
<td>140.9</td>
</tr>
<tr>
<td>Total operating surplus to monetary gross domestic product</td>
<td>39.6</td>
<td>40.2</td>
<td>38.7</td>
<td>38.0</td>
<td>39.5</td>
<td>39.7</td>
</tr>
</tbody>
</table>

*Source: Economic survey, 1971.*

#### Table 82. Wage bill of the modern sector as a proportion of monetary gross domestic product, according to different sources of information, 1960–70

<table>
<thead>
<tr>
<th>Year</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>48.6</td>
<td>—</td>
</tr>
<tr>
<td>1961</td>
<td>50.8</td>
<td>—</td>
</tr>
<tr>
<td>1962</td>
<td>49.2</td>
<td>—</td>
</tr>
<tr>
<td>1963</td>
<td>47.9</td>
<td>—</td>
</tr>
<tr>
<td>1964</td>
<td>43.8</td>
<td>46.7</td>
</tr>
<tr>
<td>1965</td>
<td>45.6</td>
<td>49.6</td>
</tr>
<tr>
<td>1966</td>
<td>45.4</td>
<td>49.6</td>
</tr>
<tr>
<td>1967</td>
<td>46.3</td>
<td>50.4</td>
</tr>
<tr>
<td>1968</td>
<td>44.2</td>
<td>48.1</td>
</tr>
<tr>
<td>1969</td>
<td>42.2</td>
<td>46.3</td>
</tr>
<tr>
<td>1970</td>
<td>42.6</td>
<td></td>
</tr>
</tbody>
</table>

*Sources: (1) Various economic surveys. (2) Ndegwa Commission report, op. cit., table 16.*
The share of other operating surplus (which includes self-employment income) is broadly constant over the period, as is the share of total remuneration of employees. Table 82 shows the wage bill in the modern sector as a proportion of monetary gross domestic product. There is a break in the series between 1963 and 1964 because of the changed coverage of the enumeration of employees, and the difference between the pre-1964 and the post-1964 period may be due to this. Since 1964 it is possible to discern some fall in the share of the gross domestic product going to wages, but the fall is not very marked. It is, however, in contrast to the figures for total remuneration shown in table 80, which have a wider coverage, extending outside the modern sector.

Table 83 shows the average wage per worker as a proportion of the gross domestic product per worker. It is on the basis of this table that the Commission concludes that there has been a rise in profits; but this table ought to show no difference from the figures for the share of wages in the gross domestic product shown in table 82, since both numerator and denominator have been divided by the same figure (number of workers). However, it appears from the text that in this case the term "worker" was interpreted as covering both wage earners and the self-employed. On the other hand, the wage figures presumably cover only the earnings of wage earners. Consequently the sharper downward trend in table 83 must be due to an increase in the proportion of the total number of economically active persons who are self-employed. Thus the trend in question is not an indication of a decline in the share of wages. But if the proportion of self-employed persons did increase during this period, then their share of the operating surplus probably did not decrease. If this is the case the figures for the operating surplus in table 80, indicating a constant share, can be taken to suggest that the share of profits (operating surplus less incomes of the self-employed) did not rise. Hence it is difficult to conclude from these figures that the share of profits has been rising.

FACTORS DETERMINING THE RELATIVE SIZE OF PROFITS AND THE WAGES BILL

It is worth briefly discussing some factors that may be responsible for determining the respective shares of profits and wages, before going on to suggest possible measures of control.
Increasing capital intensity of production

Whether this is or is not related to a rising share of profits depends, in neo-classical economists’ jargon, on whether the elasticity of substitution between capital and labour is greater or less than 1. With an elasticity of unity the share of profits and wages remains constant; with an elasticity greater than 1 the quantity of each factor used changes more than proportionately with changes in relative price, so that an increased wage will result in a more than proportionate fall in labour use and a decline in the share of wages. With an elasticity of less than unity the reverse happens. This does not tell us much, since we have no independent evidence by which we can estimate the elasticity of substitution and because technical progress during the period vitiates the use of any constant-technology production function.

A more common-sense approach may be more helpful. With a constant profit rate a rise in capital in relation to output would produce an increase in the share of profits, since $P/O = P/K.K/O$.

Rising capital intensity means an increase in capital per head (or $K/L$): it may or may not be associated with an increase in capital per unit of output. Neo-classicists believe that (apart from technical progress) the capital-output ratio would rise with increasing capital intensity; but they also believe that in such a situation the profit rate would fall. Again the argument is inconclusive.

Bargaining between trade unions and employers

Despite the considerable degree of unionisation in Kenya it would be surprising if trade unions were strong enough to eat into the employers’ share of profits, in view of the surplus of labour.

Relative price and wage trends

Profits are the difference between prices and wage costs. They thus depend on how each have changed. Some prices are controlled in world markets; others by the Government directly; and others are basically local prices subject to the protection offered. It seems to be the case that profits have risen least in the first two categories, namely government-controlled and world-priced markets. Those categories are both mainly of agricultural products. Wages have also risen least in agriculture, perhaps partly because the lower profits make employers tougher. Wage costs depend on movements in labour productivity as well as wage rates, which complicates the picture. However, it does seem that any rise in the share of profits may be largely confined to protected goods—goods protected by transport costs, tariff protection or quotas. All these forms of protection allow prices and profits to rise: many local producers are in monopoly or near-monopoly positions, and can insist on price rises by threatening employment. Two forms of protection are particularly likely to lead to this situation: first, quotas or absolute prohibitions, which allow almost any price to be charged; secondly, tariffs, which change in response to pressure from industry. Again there is very little pressure on prices.
Industry and construction

The degree and nature of protection

This is largely a question of bargaining between companies (often international) and the Government. The agreement reached depends on the bargaining strategy adopted by each side, which is dependent on the information each has, their assessment of the value of reaching an agreement, potential gains or losses and various informal means which may be used to reach a settlement. Vaitsos has pointed out that in acquiring foreign technology the developing countries may be prepared to pay a price vastly in excess of the cost to the parent company of providing it. This can result in inflated payments of royalties and other dues, or in inflated profits. As a country moves into new fields, particularly more sophisticated ones, ignorance of the minimum required terms may also result in profits that are above the minimum. This is particularly likely to be the case where there is an employment problem and the Government is anxious to receive new industry to create new jobs. This applies to local as well as foreign enterprises. In a period when many new enterprises were started on new terms it would not be surprising if profits rose.

Over-invoicing and excessive charges for technology and management

This leads to a very important point: declared profits may be very little, if any, guide to the actual profits of foreign (and some local) enterprises. Declared profits exclude payments for technology, and for inputs and for management which may, with overcharging, be profits in disguise. Again Vaitsos has shown for Colombia that declared profits of about 7 per cent can be turned into actual profits of about 135 per cent if these disguised payments are included. There is reason to suppose that there may be a similar situation in Kenya.

It has been shown that over-invoicing of as little as 5 per cent of inputs may mean that total profits are understated by as much as 35 per cent and that the outflow of profits (allowing for the amount that goes out through over-invoicing) will be twice as much as the apparent outflow. Over-invoicing by 5 per cent would be extremely modest in relation to experience elsewhere, and also to the limited evidence we have for Kenya. (In Colombia pharmaceutical firms were found to over-invoice by 155 per cent.)

This sort of situation has two important implications. In the first place it means that the country is suffering an unnecessary loss in tax revenue. Assuming that all the extra profits were taxed at the rate of 40 per cent, the loss in revenue would amount to 14 per cent of total profits, or nearly half as much as existing revenue from profits. Secondly, the possibility of over-invoicing may vitiate any attempt to control profits either through taxation or by other means.

Hence any method of profits control which excludes control over invoicing and over technology and management payments will be ineffective as far as a foreign company is concerned; and local companies are also known to resort

1 C. Vaitsos, op. cit.
2 See Technical Paper 16, on foreign investment in Kenyan industry.
to over-invoicing as a method of expatriating capital, so control is necessary in their case as well.

METHODS OF CONTROLLING PROFIT-EARNING OPPORTUNITIES

There are broadly two approaches to the control of profits: controlling opportunities to earn profits, and taking (or controlling the use of) profits when earned. The first approach may be taken through price control, the promotion of competition, and a well informed and resolute stand by the national Government towards foreign companies over which it has only limited power.

Price control

This is possible only for locally consumed items. It is extremely difficult to operate for more than a few standard commodities. Quality changes make such control difficult, while without detailed objective research into each case it is difficult to know whether a particular price rise is justified or not, and even more difficult to enforce a price reduction. Since the beginning of 1972 all prices in Kenya have been subject to control. No increase in the price "ordinarily charged" is allowed in the sale of goods whether retail or wholesale in the importing, exporting, catering, motor vehicle repairing, building construction and repair, electrical repair and electronic servicing trades. Only when changes are approved by the Minister for Finance and Economic Planning are price rises allowed. The Minister is advised by a Price Control Advisory Committee composed of representatives of employers and of trade unions and other bodies. A detailed questionnaire is sent to those who make a request for a price rise, requiring information on costs and profits. So far the Committee has recommended approval of most of the requests made. It is not known how far other prices have remained constant as required. So far the Committee has not drawn up any general criteria for the approval or otherwise of price changes.

The current price control scheme was intended as a temporary measure in reaction to the price rises likely to occur after the devaluation in 1971, but it could be extended to form the basis of a price control system consistent with an incomes policy. Some changes would be necessary.

First, general criteria according to which price changes might be justified need to be laid down in the light of the incomes policy and other objectives. Secondly, as a long-term measure it would be impossible to examine and permit (or refuse) every price change. All price rises should be registered (and possibly for all a form similar to the one used at present should be filled in), but only some of them can be thoroughly investigated. Thirdly, therefore, a random sample of price changes should be investigated and the rest allowed through some time after the application (e.g. three months). Fourthly, there are some arguments in favour of making the procedure of investigation and decision more public, so that justice can be seen to be done. What is needed is some body which is known to be objective and impartial, like the Industrial Court, with a professional staff that would be responsible for investigation and recommendations (possibly even decision).
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Competition

In general, vigorous competition probably does prevent excessive profits. Competition can be increased either in a fully protected market open only to businesses established within the country, or in a market less fully sheltered by barriers to international trade.

Quotas eliminate foreign competition altogether. From this point of view unchanging tariffs are preferable. To the extent that tariffs are justified by reference to infant industries two points are relevant. First, it is difficult to argue that a subsidiary of a huge international company is an infant, so that protection should be offered only very sparingly to such companies. If at first they can operate only at a loss but believe that ultimate profitability nevertheless justifies such operation, they can bear the loss from other parts of their operations. Secondly, a time limit should be placed on protection for infant industry reasons, and perhaps the protection should be gradually reduced through a sliding scale. At present protection seems to provide more than the minimum profits necessary to get business going.

Internal competition is difficult to achieve with a small market and a large scale of operation. But a policy which favours the small scale to a greater extent would have the added advantage of making excessive profits more difficult to earn, except temporary entrepreneurial profits from new combinations of existing means of production (i.e. Schumpeterian profits).

Government policy towards foreign companies

International companies are able to earn excessive profits because they often monopolise the market, demand excessive protection and charge excessive prices for technology, management services, etc. This is in part because of their strong bargaining position in relation to the Government. Improving the Government’s bargaining position through increased information, and generally a tougher attitude, may substantially reduce their profits.

COMPANY TAXATION

Profits can be controlled by changing the structure of company taxation. Increases in tax on profits would increase the total burden of company taxation, as would the abolition of investment allowances. Such action could be taken in response to a rise in the share of national income going to profits.

The tax structure could also be made to favour retained profits as against distributed profits. A possible method would be to raise the withholding tax on dividends. For example, the rate of increase of dividends could be held to the permitted over-all rise in wages. This could be done on a company-by-company basis, or an aggregate basis with any increase greater than the permitted norm taxed away. Any method of encouraging or enforcing extra plough-back without raising taxes will raise capital gains: hence it needs to be accompanied by a capital gains tax.

A basically unsatisfactory feature of both these proposals is that while they are directed at profits declared, the foreign company can avoid them by over-
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invoicing, false fees, etc. These measures must therefore be accompanied by a much tougher policy towards such activities. A two-pronged approach is required. First, there should be a case-by-case investigation into particular companies, accompanied by much tougher penalties. As a supplement to this, the incentives need to be changed so that it is no longer of such benefit to companies to over-invoice, etc., and under-declare profits. A start was made in Kenya by introducing a withholding tax of 20 per cent on management fees and royalties. This still leaves them taxed less heavily than profits, and does not affect over-invoicing. Even with detailed investigation, over-invoicing may be difficult to establish, since many of the prices charged by an international company to its subsidiary are basically arbitrary, and therefore not much light may be shed by objective investigation.

Accordingly, what is needed is to remove the incentive to over-invoice, and to reduce the loss to Kenya from such activities. Both these objectives could be achieved by changing the basis of company taxation from declared profits (which are an arbitrary and largely company-controlled figure) to profits plus management fees plus royalties plus imported inputs. If the tax rate were the same for all these items, there would be no tax incentive to disguise one sort of payment for another, and assessment of what is really happening would thus be made much easier; moreover, in so far as over-invoicing continued there would be no tax loss to Kenya as a result. (Over-invoicing might well continue, partly to avoid restrictions on profit remittances, or on the total level of profits, such as are suggested above, and partly to avoid the embarrassment of showing much higher profits in Kenya than before or elsewhere.)

Some implications of the proposed tax for different companies are illustrated in two hypothetical cases opposite, using notional accounting units. It should be noted that investment and depreciation allowances are ignored throughout.

Distribution of burden of tax

It will be seen that in case 1, the higher the proportion of imports in total inputs, the higher the tax burden on the firm concerned. In case 2, the higher the proportion of profits in local value added, the higher the tax burden on the firm concerned. In so far as profits are positively related to capital intensity, the greater the capital intensity of the firm the more its tax burden will increase.

Rate of tax and total burden of company taxation

Obviously, with the much larger base, the rate of tax, while maintaining revenue, would be much lower than the current profits tax. Thus despite a reduction of the rate of tax from 40 to 4 or 5 per cent in the two cases illustrated, the total tax return for each pair of firms remains unchanged at 8 and 6 accounting units respectively. It must be emphasised that the total burden of taxation need not increase at all. Only the distribution need be altered by the change. Hence, assuming no increase in the total burden, any firm whose ratio of declared profits to imported inputs plus management fees plus royalties is average will not have its tax burden affected. Firms that import more inputs
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Case 1. Two firms (A and B) with the same value of sales, but different proportions of local and imported inputs (including remitted management fees)

<table>
<thead>
<tr>
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<th>A</th>
<th>B</th>
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<tbody>
<tr>
<td>Profits (declared)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Imported inputs</td>
<td>50</td>
<td>80</td>
</tr>
<tr>
<td>Local labour and material</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>Sales</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Current tax (40 per cent of declared profits)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Proposed alternative tax on profits and imported inputs (at the rate of 5.3 per cent)</td>
<td>3.2</td>
<td>4.8</td>
</tr>
<tr>
<td>Change in tax burden on individual firm</td>
<td>-0.8</td>
<td>+0.8</td>
</tr>
</tbody>
</table>

Case 2. Two firms (C and D) with the same value of sales and imported inputs, but different proportions of profits to other local payments

<table>
<thead>
<tr>
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<th>C</th>
<th>D</th>
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<tbody>
<tr>
<td>Profits (declared)</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Imported inputs</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>Local inputs</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Sales</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Current tax (40 per cent of declared profits)</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Proposed alternative tax on profits and imported inputs (at the rate of 4.15 per cent)</td>
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<td>2.9</td>
</tr>
<tr>
<td>Change in tax burden on individual firm</td>
<td>-0.9</td>
<td>+0.9</td>
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than the average in relation to declared profits would have their tax burden increased, while firms whose ratio of imported input was below average would have their burden decreased. Any proposal to increase the total revenue from taxation must be distinguished from the change in the tax base.

Administration

The Kenya tax administration appears to be heavily overloaded, with much direct taxation being done on the basis of self-assessment. There are two different ways in which this taxation could be administered without overburdening the administration. First, a tax on imported inputs at the same rate as the over-all rate of customs duty could be levied by the Customs in addition to any other customs duties to which the goods were subject when they entered the country. The invoices received by the Customs could then be sent to the tax administration, who could then be responsible for levying the tax on profits and management fees and royalty payments. Since they already levy these taxes there would be no increase in administration for them. A second and
probably less satisfactory alternative would be to levy the tax as a tax on turnover, but to allow companies to claim exemption for any local payments for labour or other inputs by producing invoices for such payments.

Coverage

The tax as described is designed to deal with the special problems raised by foreign companies operating in Kenya. This raises two difficult questions: first, how to define a foreign company; and secondly, whether local companies should also be included. If local companies are included there would be no problems of definition, and no avoidance of the tax by using local companies to import on behalf of foreign corporations. It would also prevent over-invoicing by local companies anxious to expatriate capital. Hence it seems that local companies should be included.

Income distribution effect

The proposed tax amounts to a tax on turnover less all local inputs, including labour. It should thus act as a general incentive to the use of such local inputs, which amounts to an incentive to the use of local labour. In terms of income distribution it is thus likely, on the whole, to favour goods consumed by the poorer sections of the community, which tend to have a higher local labour and material content.

Effect on exports

As described, the tax would not discriminate between firms according to whether they are exporters or not. Thus two firms, with the same proportion of imported inputs and profits, one exporting all its output and the other none, would be treated in the same way. They are already treated in the same way, the only difference being that now they are taxed according to profits; this base would be changed, but the total tax paid need not change. It would be an unnecessary complication to build a special export incentive into the tax, and it would be better to encourage exports by other means. Exports raise one other problem. Some forms of concealed profit remittance consist of under-invoicing of exports rather than over-invoicing of imports. This tax would not deal with this problem, which can hardly be of great consequence for Kenya at the moment because of the small quantity of manufactured exports. In so far as it becomes a problem it will need to be dealt with by case-by-case investigation.

Investment and depreciation allowances

Nothing has been said about the current investment and depreciation allowances. The proposal to reduce, abolish or replace them is separate from the present proposal, though any change could easily be fitted in with the new tax.
Since it was set up, the Industrial and Commercial Development Corporation has attempted to pursue two goals, namely—

(a) to promote the development of African businesses by extending credit to enterprises which were unable to obtain it through the commercial banks; and

(b) to operate as a commercial organisation, meeting its running expenses through interest charged on loans.

These two goals have proved largely incompatible. Established African businesses, which are the best credit risks, have by and large not needed the Corporation's services. They have usually been able to borrow through the commercial banks, and have often preferred to do so, because the loans can be arranged more quickly, and repayment terms are more flexible; and so the Corporation has been left to extend credit to businesses in which the risk has generally been high. In the circumstances, it is hardly surprising that defaulting on repayment has been a persistent and largely intractable problem.

This does not mean, however, that the credit facilities available through the commercial banks are adequate to the needs of developing African businesses; far from it. The present system seems to us to have two major weaknesses:

(a) there is no institutionalised system whereby African businesses in which capital shortage is a constraint on development can be identified and their credit-worthiness evaluated; and

(b) the extension of credit is separated from the provision of other types of assistance and advice which may be equally important, or the absence of which may be more important constraints on development.

However, this credit should not be extended to small businesses until an evaluative case study has been made, and then as only one element in the coordinated provision of the various kinds of advice and assistance called for

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1 As explained in Chapter 11, recommendations on these lines have now been proposed by the working party on small-business development of the Ministry of Commerce and Industry.
Proposed institutional structure to support and facilitate development of small-scale African businesses

**University**  
(Faculty of Commerce and Business Studies)  
Responsible for—  
(a) part-time and sandwich courses geared to the needs of large-scale businesses (e.g. critical path analysis, use of computers, etc.);  
(b) assistance with the research and evaluation programme of the Industrial and Commercial Development Corporation.

**Commercial banks**  
Responsible for extending credit to businesses receiving assistance from Kenya Industrial Estates Ltd. and the rural industrial development centres, in consultation with business analysts and credit supervisors:  
(a) overdrafts—short-term working capital;  
(b) loans—long-term (up to 10 years). Both loans and overdrafts backed by guarantee fund managed by the Industrial and Commercial Development Corporation.

**Industrial and Commercial Development Corporation**  
A small-scale business development corporation responsible for—  
(a) co-ordination of activities of Kenya Industrial Estates Ltd. and rural industrial development centres;  
(b) evaluation of small-business development programme, in association with the University; basic data from case studies prepared by business analysts;  
(c) management of loans guarantee fund.

**Kenya Industrial Estates Ltd.**  
1. Major differentiating characteristic: their services are locational. Provide advice and assistance to a clustered group of businesses.  
2. Most suited for businesses where—  
   (a) there is high risk, but also high potential (mostly new types of venture);  
   (b) intensive and concentrated services are required.  
3. Element of subsidy through—  
   (a) advice and assistance package;  
   (b) loan guarantees;  
   (c) site provision at reduced rental.

**Rural industrial development centres**  
1. Major differentiating characteristic: the businesses they serve are scattered, and the staff mobile. The staff seek out existing businesses in situ, and provide advice and assistance similar in kind, but generally lower in intensity, to that provided by Kenya Industrial Estates Ltd.  
2. Most suited for businesses which have already demonstrated viability, but which would benefit from selected inputs from the advice and assistance package.  
3. Element of subsidy through—  
   (a) advice and assistance package;  
   (b) loan guarantees.  
4. Rural industrial development centres are not miniature industrial estates. They serve an essentially different type of business; but the specialist staff should be interchangeable.
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Types and functions of staff needed to man the industrial estates and rural industrial training centres

A. Generalist staff: Business analysts

(a) Responsible for the co-ordination of inputs. Design the advice and assistance package in consultation with specialist staff, and supervise its implementation.

(b) If working in a rural industrial development centre, seek out and make contact with existing businesses which could benefit from the advice and assistance package.

(c) Create a case history file for every business on the books, and update it at regular intervals.

(d) Discuss content of case history files with the evaluation and research staff of the Industrial and Commercial Development Corporation. Communicate research findings to specialist staff.

B. Specialist staff

(a) Management advisers. Advice and training in business management, accounts, etc. Perhaps one to each industrial estate and rural industrial development centre.

(b) Legal advisers. Perhaps one or two only, located at the offices of the Industrial and Commercial Development Corporation but on call to industrial estates and rural industrial development centres.

(c) Technical advisers. Technical assistance, mainly to industrialists. Most centred in industrial estates and rural industrial development centres; numbers needed dependent on level and sophistication of industrial processes. Some specialist technicians might be retained on a part-time consultancy basis from large-scale industry.

(d) Marketing advisers.

(e) Credit supervisors. Responsible, in consultation with the business analyst, for determining credit requirements of the business, and for negotiating terms with the commercial banks.

in the particular case (subsequently referred to as the "advice and assistance package"). In this way, the interests of both borrower and lender would be protected much more adequately than they are at present. A co-ordinated attack on constraints should mean, for the borrower, that the development of his business is accelerated, and for the lender, that the risks of default on the repayment of his loan are substantially reduced.

The chart opposite sets out the kind of institutional structure which would be necessary to support and facilitate the development of small-scale African businesses. This is followed by a description of the types and functions of staff which would be needed to man the institutions.

Business analysts do not exist at present, but because of their role as co-ordinators and communicators they would be the key people in both industrial estates and rural industrial development centres. At least one would be needed for each centre. Ideally these analysts should have had business experience themselves, but initially it would probably be necessary to use B.Com. graduates with on-the-job training.

The advice and assistance package would be common to businesses making use either of the industrial estates or of rural industrial development centres. For any given business only selected inputs from the package (to be determined
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by the business analyst) would be needed. The range of inputs available corresponds to the various skills of the specialist staff (management, legal, technical and marketing advice, credit).

The Corporation would cease to be mainly a credit-extending organisation. Instead it would be responsible for co-ordinating the entire small-business development programme, for evaluating the work of the industrial estates and rural industrial development centres, and for research into business development. It would also administer the loans guarantee fund.

The industrial estates and rural industrial development centres would be administratively independent, but their activities would be co-ordinated through the Corporation. There should be institutionalised arrangements for staff exchanges.

The needs of large-scale businesses (largely foreign-owned) could perhaps best be met through sandwich and part-time courses offered by an expanded Faculty of Commerce and Business Studies at the University.
Building and construction contributed some £22 million to gross domestic product in the monetary sector and just under £10 million to gross domestic product in the non-monetary sector; thus the value added generated by the industry accounted for 5.4 per cent and 8.0 per cent of the respective aggregates. In terms of capital formation by type of asset in the modern sector, investment in building and construction amounted to £45 million, or 43 per cent of total capital formation; some 40 per cent of the total construction investment came from private sources, as compared with more than half in the mid-1960s. Self-help schemes have contributed an estimated £2 million annually to private capital formation over the four years 1967-70, nearly half this contribution being in the field of school buildings. If the value of dwellings constructed in the traditional sector is included, the share of residential construction in total construction investment amounted to 31 per cent and that of non-residential building to 26 per cent, the remaining 43 per cent covering other construction and works, mostly civil engineering. These proportions have remained relatively stable over the last few years, plus or minus 3 per cent, and match fairly closely the typical range in other African countries having reached similar levels of economic development.

On the basis of data provided by the statistics division of the Ministry of Finance and Planning, an estimate of total construction output, i.e. new work plus repairs and maintenance, is made as follows. Assuming that the latter accounts for between 10 and 15 per cent of the total, the total gross output of construction in the modern sector in 1970 was £50-53 million. Of this, some 60 per cent were inputs (materials, fuel, etc.), leaving 40 per cent (say £20-21 million) for value added. Wages account for about 70 per cent of value added; the total wage bill was therefore £14-15 million.

With monthly earnings of construction workers amounting to some 200 sh. for unskilled urban labour, 400-500 sh. for skilled urban workers and up to 800-900 sh. for supervisory staff, the average weighted earnings of all construction workers are in the range of 320-350 sh. per month or £190-210 per

1 Statistical abstract, 1971, p. 35.
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annum. Even allowing for the salaries of expatriate staff, it is unlikely that the national average over-all is higher than £240–250.

Thus the man-years remunerated in the construction industry total at least 60,000, or nearly double the figure officially reported. In view of the high proportion of casual workers and the great fluctuations of construction activity, the total number of people directly employed in the industry is in the range of 70,000 to 80,000—probably more. Assuming that a wage earner supports 4 or 5 additional persons, the total number of people dependent on the building and construction industry is therefore between 350,000 and 450,000, not counting those involved in the production and transport of building materials and components.

It can be seen that on average one man-year generated some £800–900 of total construction output, probably more in residential than non-residential building and almost certainly less in simple civil engineering work where the proportion of material inputs is considerably less.

Expressed in a different way, the typical so-called “low-cost” dwelling erected by the public bodies required approximately one man-year of construction manpower as compared with two-thirds of that amount in the United Kingdom and less than one-half in the United States.

The building cost per square metre is equivalent to one month of average earnings of a construction worker. This relationship is valid for a surprisingly large number of countries, whether advanced or less developed, north and south of the Equator, and irrespective of whether they have socialist or market economies.

With a minimum statutory standard of 35 to 50 m² per dwelling for the non-existing “average household”, these relationships mean that the capital cost of a minimum “modern” urban dwelling represent three to four years of income of the equally fictitious “average construction worker”, or, more meaningfully, six to eight years of income of the lower-paid unskilled urban labour force.

With the current national and international sources for long-term housing finance (the National Housing Corporation, the Commonwealth Development Corporation, the World Bank, the United States Agency for International Development, etc.) the monthly economic rent would amount to roughly 1 per cent of the capital loan. It follows that the household with the lowest income would have to devote between 75 per cent and 95 per cent of its income to paying for its dwelling.

At the lower end of the scale of housing costs, it is claimed that a loan of £100 to cover the cost of basic materials—not including walling materials, on the assumption that walls could be built of sun-dried earth blocks—would enable a household to build a two-room house, by self-help methods on a plot supplied with basic services, at a unit cost of about £250.

Prices quoted for the construction of primitive shelter in the “unauthorised” areas of Nairobi are lower still, in the range of £25–30 per room.

At the higher end of the scale, the public body responsible for housing is currently engaged in a mortgage scheme under which houses are sold for up to £7,000 each.

No figures are available on the total number of permanent dwellings built. The public sector is reported to have completed some 4,000 dwellings in
1970—nearly four times the rate recorded for 1964—at an average cost of just over £1,000 per unit. On the other hand the floor area of private residential buildings completed in main towns and officially recorded is reported to have amounted to 220,000 m², a sixfold increase compared to the depressed figures for 1964, at an average cost of £18 per m².

Assuming an average floor area of 60–70 m² per dwelling, this is the equivalent of between 3,200 and 3,700 dwellings. Thus the total number of dwellings completed in 1970 in the "modern" sector can be estimated to be in the range of 7,000–8,000.

Some public-sector dwellings are built outside the urban areas, some private dwellings are completed inside the main towns. Assuming that these two factors compensate each other, the rate of "modern" dwelling construction in urban areas, after climbing very rapidly in the last few years, has barely reached half the estimated requirements. The latter, based on the rate of natural population growth, urban migration, annual replacement and some allowance for compensating backlog, can be crudely estimated at 15–18 dwellings per annum per 1,000 population. This, incidentally, is the target set by the UN for areas in course of rapid urbanisation in the developing countries. The remainder of the effective demand is met by the so-called "informal" sector, mostly in the form of privately owned, rented accommodation, with precarious tenure and at standards of density and environmental quality which constitute serious social, public health and possibly even political hazards.

Building prices reflect the great inequalities in income distribution and amenity standards already pointed out. For residential buildings, they vary between less than £3 per square metre for the substandard urban and peri-urban settlements, to £3–5 for the traditional Swahili house prevailing on the coast, £12–15 for the lowest-cost "modern" urban dwelling sponsored by public agencies, and up to £40–50 for upper-grade housing in Nairobi.

Another significant factor is the great variation in unit cost for "modern" buildings of similar character, depending on their distance from the Mombasa-Nairobi-Kisumu axis, with a maximum of nearly 100 per cent additional cost for the remote areas near the Somali and Ethiopian borders. Almost all of the difference is attributable to the transport cost of "modern" building materials and components, whose production is essentially limited to a few major urban centres.

Building and construction prices have increased markedly since 1964. There is no official index of building costs; that used for deflating the modern sector in national accounts shows an increase of over 30 per cent, which is broadly in agreement with other estimates in the public low-cost housing sector, but well below the increase revealed by the average cost per square metre of private residential buildings completed in the main towns. However, the latter increase is probably partly caused, to an extent that cannot be measured, by a rise in standards.

In 1970, the total apparent consumption of cement amounted to 290,000 tons, or the equivalent of about 6.5 kg per £ of capital formation in construction.

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1 On the basis of similar assumptions, the average annual number of dwellings completed in the modern sector over the period 1964–70 is between 3,000 and 3,200.
in the modern sector at current prices. This crude technological index, when expressed at constant prices, i.e. after allowing for price inflation, had risen by 40 per cent since 1964, thus revealing a not surprising trend towards higher specific consumption per unit of output, owing partly to a raising of standards in the modern sector and changes in the type of buildings completed, and partly to an increasing use of cement in the “informal” sector.

The import content of construction has been variously estimated at less than 10 per cent of total output in the modern sector (1967 figures, covering the imported content of current inputs but excluding plant and machinery) or more than 60 per cent of total cost (1970 figures for a hospital ward, including equipment and an estimate of indirect imports included in domestically produced building materials and components).

The relative materials import content is not directly related to the standard of building—except for the luxury category in which there are lifts, air-conditioning equipment, etc.—since some of the basic inputs for even the most economical type of building in the modern sector are imported (corrugated iron sheets, pipes, sanitary ware, practically all sheet glass, hardware, etc.). However, most of these materials and components could be manufactured locally, and few of these manufactures would be heavily dependent on imported primary products or semi-finished materials, although in the early stages of development they would require plant and knowledge from abroad.

The capital formation by the construction industry is reported to have amounted to £8 million in 1970, of which over £6 million was in plant, machinery and transport equipment. This seems an exceedingly high figure, in relation to output or as compared to ratios prevailing in other countries, developed and developing. It is also out of proportion to the production accounts of even the largest European contractors' firms. Even assuming a very high rate of expansion of construction activity or high expectations in that respect, the highest plausible figure could not be more than 6–8 per cent of total gross output, or 40–50 per cent of the recorded value.

Building costs: breakdown and trends

The analysis of the composition of building costs and of their trend over time constitutes an essential step for understanding the mechanics of the building process and for identifying major policy issues.

Two types of breakdown of building costs are currently utilised: the first according to elements of cost (materials, labour, plant and machinery, overheads, profits, etc.), and the second according to functional elements (foundations, superstructure, finishes, equipment, etc.). Neither is free from ambiguity: the boundaries between categories are often blurred, definitions vary with the user or the purpose of the exercise, etc. In the last resort most of the information comes from estimates and not from actual records kept on the site.

This is an area of research which should be pursued actively by government departments responsible for building and construction and by research and development organisations.

Changes in the composition of total gross output of construction at the national level can be assessed from the following aggregate percentages derived from unpublished estimates of the statistics division:
Industry and construction

<table>
<thead>
<tr>
<th></th>
<th>1967</th>
<th>1969</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inputs</td>
<td>60.3</td>
<td>51.3</td>
</tr>
<tr>
<td>Labour costs</td>
<td>32.5</td>
<td>29.2</td>
</tr>
<tr>
<td>Operating surplus</td>
<td>7.2</td>
<td>19.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The ratio of labour cost to total output varies considerably between the private firms (25 per cent and 20 per cent for 1967 and 1969 respectively) and the public sector (46 per cent and 50 per cent), which is understandable since in the latter sector only nominal operating surpluses are recorded.

Ratios that are similar, but limited this time to firms employing 50 people or more, were obtained from the survey of industrial production. It will be seen that between 1964 and 1969 the ratio of labour cost to gross output has varied between 23 per cent and 30 per cent and that of inputs between 57 per cent and 68 per cent, a not unreasonable range considering the uncertainty attached to contractors' records and to census collections of this kind.

The statistical ratios described above are confirmed by a few selected examples collected in the course of interviews. Thus for instance in three different low-cost housing projects recently completed in Nairobi, including one site-and-services scheme, labour costs accounted for just over 30 per cent of the total cost, with materials representing between 50 and 60 per cent, depending on the standard of building and on the technology used.

The breakdown by functional element of one of these schemes, comprising dwellings with a floor area of 38 m² and with a total building cost of £620 per unit, shows that the superstructure accounted for over 40 per cent of the total cost, to which the roof alone contributed 20 per cent.

In a pilot housing scheme recently completed in a medium-sized town, and costing just under £10 per m², materials (which included a precast concrete frame, mud brick walls and a light concrete roof) amounted to 55 per cent, and labour costs to 29 per cent, of the total cost, which included transport, roads and extras.

Detailed information is also available on the breakdown of costs of the typical "Swahili" house in Mombasa and elsewhere along the coast. According to a survey carried out in mid-1970, the average cost per square metre of built-up floor area varied between £3.7 and £7.1. The breakdown of the cost of the typical four-room basic house with a roof made of "makuti" (woven palm tiles) and without electricity or piped water can be summarised as follows:

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wooden framing for walls and roof</td>
<td>20</td>
</tr>
<tr>
<td>Earthwork, walls</td>
<td>22</td>
</tr>
<tr>
<td>Doors</td>
<td>10</td>
</tr>
<tr>
<td>Windows</td>
<td>7</td>
</tr>
<tr>
<td>Roof</td>
<td>5</td>
</tr>
<tr>
<td>Pit latrines</td>
<td>10</td>
</tr>
<tr>
<td>Labour</td>
<td>26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
</tr>
</tbody>
</table>

477
A corrugated iron sheet roof would add another 15 per cent to the total cost, and water and electricity 10 per cent. It is also reported that if funds are available, the house can be completed in two to three months, although very often the construction period is extended over months or even years.

The detailed breakdown of the estimated cost of typical secondary-school projects undertaken by the Ministry of Works in different parts of the country and costing between £25 and £30 per m² shows that materials—which included a prefabricated structural frame, double-layer asbestos cement roof with insulation, plumbing and electrical services—accounted for almost exactly two-thirds of the total.

The breakdown by functional element shows that four elements, viz. roof, joinery, structural steelwork, and wall and floor finishes, accounted for roughly 12 per cent each of the total estimated cost, or, taken together, 50 per cent of the total cost, not including contingencies.

The ratio of material cost to total cost for each functional element varied widely, from a minimum of 24 per cent for excavation and earthwork to 80 per cent for walling and carpentry and an absolute maximum of 86 per cent for the structural framework, made of imported steel sections.

By contrast, the breakdown of the cost of a road project financed by the World Bank and worth nearly £1 million shows that wages accounted for only 25.6 per cent and materials 13.9 per cent, as against 34.5 per cent for plant (including depreciation, spares, repairs and interest) and 9.2 per cent for fuel and lubricants. Thus the direct and indirect import content of the project was in excess of 60 per cent.

Two general conclusions emerge from the preceding analysis. First, building costs per unit of floor area vary over an exceptionally wide range, reflecting the great variety of standards prevailing in construction and, indirectly, the great inequalities in income distribution. Secondly, labour costs represent a remarkably constant proportion of the total, between 25 per cent and 30 per cent, quite independently of the standard adopted or the technology used; within this narrow range, the differences that occur can be traced only to the ratio of skilled to unskilled workers and to the unit wages paid, which are obviously lower in the informal sector than in the formal one.

Trends of building costs or prices over time are more difficult to characterise, owing to the discrepancies observed in the few public and semi-public indices available. These are presented in table 84.

In the absence of an official index, it can only be stated that between 1964 and 1970 average building prices increased by at least 30 per cent—probably more if one is to judge from the cost per square metre of large residential buildings in main towns. This is a much larger increase than either the over-all deflator of monetary gross domestic product or the wage earners' index of consumer prices for Nairobi.

Indices of prices paid for basic inputs and labour by the Ministry of Works are calculated separately. They show that between 1964 and 1970 ballast went up by 103 per cent, stone by 8 per cent (although the 1971 value was up by 25 per cent), sand by 100 per cent, mild steel bars by 15 per cent, cement by 8 per cent, skilled labour by 72 per cent, semi-skilled by 20 per cent and unskilled by 50 per cent. A weighted index of wages (the labour force being arbitrarily taken as consisting of skilled, semi-skilled and unskilled workers in
<table>
<thead>
<tr>
<th>Index</th>
<th>60</th>
<th>61</th>
<th>62</th>
<th>63</th>
<th>64</th>
<th>65</th>
<th>66</th>
<th>67</th>
<th>68</th>
<th>69</th>
<th>70</th>
<th>71</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of new buildings completed in the private sector in main towns:</td>
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<tr>
<td>Residential</td>
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<td></td>
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<tr>
<td>Non-residential</td>
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<td>Total</td>
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<td></td>
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<tr>
<td>Cost of residential buildings of 600-1,000 m² completed in main towns</td>
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<tr>
<td>Cost of low-cost house built by the National Housing Corporation (monthly figures adjusted and averaged)</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Deflators for value added in building and construction:</td>
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<td></td>
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<tr>
<td>Non-monetary sector</td>
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<tr>
<td>Monetary sector</td>
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</tr>
<tr>
<td>Deflator for the gross domestic product of the monetary sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Wage earners' index of consumer prices, Nairobi ¹</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

... = Not available.

¹ December each year (July 1964 = 100).
<table>
<thead>
<tr>
<th>Index</th>
<th>60</th>
<th>61</th>
<th>62</th>
<th>63</th>
<th>64</th>
<th>65</th>
<th>66</th>
<th>67</th>
<th>68</th>
<th>69</th>
<th>70</th>
<th>71</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials consumption ¹</td>
<td>179</td>
<td>104</td>
<td>102</td>
<td>104</td>
<td>100</td>
<td>123</td>
<td>132</td>
<td>166</td>
<td>195</td>
<td>221</td>
<td>229</td>
<td>.</td>
</tr>
<tr>
<td>Construction activities in the modern sector ²</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>100</td>
<td>105</td>
<td>128</td>
<td>162</td>
<td>195</td>
<td>221</td>
<td>240</td>
</tr>
<tr>
<td>Specific consumption of cement divided by value added ³</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>100</td>
<td>114</td>
<td>132</td>
<td>158</td>
<td>159</td>
<td>142</td>
<td>142</td>
</tr>
<tr>
<td>Specific consumption of cement divided by capital formation ⁴</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>100</td>
<td>107</td>
<td>125</td>
<td>128</td>
<td>128</td>
<td>144</td>
<td>139</td>
</tr>
</tbody>
</table>

. = Not available.

¹ Unweighted average of quantity indices of cement (apparent consumption), softwood (production), sheet glass (imports) and sanitary ware (imports).
² Average of indices of value added by construction and of capital formation in construction at constant prices.
³ Index of apparent consumption of cement divided by value added by construction at constant prices, modern sector.
⁴ Index of apparent consumption of cement divided by capital formation in construction at constant prices, modern sector.
the proportions $1:2:3$ and the data being derived from Ministry of Works sources) would show an increase of 44 per cent over the same period.

A separate attempt was made to verify the validity of the constant-price series on value added by construction in the monetary sector and on capital formation in construction in the modern sector as an indirect means of assessing the order of magnitude of the price increases of construction since 1964.

For this purpose a combined index was calculated based on the unweighted average of the volume indices of apparent consumption of cement, the production of softwood and imports of sheet glass and sanitary ware. These materials were chosen because, with the exception of softwood, their end use is exclusively in building and construction.

The comparison between this crude index of materials consumption and the average of the two series of output shows a remarkable degree of consistency, with the exception of 1965 (see table 85). Remembering that, as already noted elsewhere, the specific consumption of cement has grown markedly over the period, it is reasonable to infer that the figures for output at constant prices are slightly overestimated, or alternatively that the price deflator for construction is underestimated.
20. EMPLOYMENT, INCOMES AND GROWTH IN THE SERVICES SECTOR: SOME EMPIRICAL ESTIMATES

The purpose of this paper is to put together scattered data on employment and on incomes from self-employment and wage employment in Kenyan commerce, transport and services in an attempt to identify and explain relative rates of employment growth in the past few years. It goes on to review in some detail the past policies of the Government, especially in the transport sector.

Annual output and employment during 1967–70 are illustrated in table 86.

COMMERCE AND MISCELLANEOUS SERVICES

From 1967 to 1970, salaried employment in commerce and miscellaneous services (social, business, recreational and personal) declined considerably while there was a rapid increase in the growth of average earnings. This is particularly true of wholesale and retail trade. While average earnings increased at a rate of 18.2 per cent per annum, employment declined at the rate of 4.5 per cent in the motor vehicle and machinery trade. In the case of retail trade, the growth of average earnings at the rate of 5.3 per cent compared with a decline of employment at the rate of 5.2 per cent per annum. ¹

Table 87 presents the ratios of self-employed persons to wage earners in commerce and miscellaneous services. In general, both commerce, particularly retail trade, and miscellaneous services, with the exception of recreational services, registered an increase in the share of self-employment. In retail and wholesale trade the ratio of self-employed persons to wage earners increased when the growth of wage employment was negative. One may argue that in Kenya, changes in self-employment are not affected by the growth of wage employment. To the extent that the hold of the extended family system is strong, there may well be an institutional preference for self-employment. It is difficult to verify this hypothesis since part of the increase in self-employment in trade seems to have been induced by the conscious policy of the Government.

In spite of a very large increase in commodity production, employment in distribution has decreased, while there has been a reasonably high increase in

¹ These rates are based on data taken from the annual enumeration of employees.
## Table 86. Annual increases in output and employment in the goods and services sectors, 1967-70 (Percentages)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Gross domestic product</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goods sectors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>14.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Manufacturing and repair</td>
<td>13.2</td>
<td>6.4</td>
</tr>
<tr>
<td>Building and construction</td>
<td>20.3</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Services sectors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>9.8</td>
<td>-5.3</td>
</tr>
<tr>
<td>Transport</td>
<td>8.3</td>
<td>-1.5</td>
</tr>
<tr>
<td>Banking, insurance and real estate</td>
<td>14.2</td>
<td>10.1</td>
</tr>
<tr>
<td>All services</td>
<td>11.0</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Note: These figures may not be entirely comparable. For one thing, employment refers only to "modern" employment. For services, especially, the gross domestic product figures may also take into account the contributions of persons who are not taken into account in the employment figures. This may partly explain the large productivity increases implicit in the figures given in the table. For government services, the valuation of output and productivity are not very meaningful; the value of wages and salaries paid by the Government is considered equal to output. Thus, a plan to raise output of the services sector in which the share of government is quite large might imply a policy of raising the salaries of teachers and civil servants—which could be self-defeating.

Sources: Annual enumeration of employees and Statistical abstracts.

## Table 87. Self-employment and wage employment in the various branches of commerce and services: ratios and annual rates of change, 1968-70 (Percentages)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Ratio of self-employment to wage employment</th>
<th>Average annual percentage rate of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerce</td>
<td>21.3</td>
<td>30.7</td>
</tr>
<tr>
<td>Wholesale</td>
<td>6.6</td>
<td>8.6</td>
</tr>
<tr>
<td>Retail</td>
<td>72.3</td>
<td>108.9</td>
</tr>
<tr>
<td>Dealers in motor vehicles and machinery 1</td>
<td>3.6</td>
<td>3.8</td>
</tr>
<tr>
<td>Services</td>
<td>1.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Administrative</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Social</td>
<td>0.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Technical and legal</td>
<td>4.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Recreational</td>
<td>38.8</td>
<td>3.4</td>
</tr>
<tr>
<td>Domestic, laundry, personal</td>
<td>3.8</td>
<td>4.9</td>
</tr>
</tbody>
</table>

1 Motor vehicle dealers and non-electrical and electrical machinery and appliance dealers. Firms that sell any other commodities and have both wholesale and retail sales are classified as either wholesalers or retailers according to whichever of the two activities appears to be the more prominent on the basis of sales.

Source: Annual enumeration of employees.
Table 88. Self-employment and wage employment in commerce and services, 1966

<table>
<thead>
<tr>
<th>Sector</th>
<th>Earnings per employee (£)</th>
<th>Labour income per self-employed person £</th>
<th>Ratio of self-employed persons to wage labour (per cent)</th>
<th>Share of labour income in total earnings (per cent)</th>
<th>Ratio of earnings from wage employment to those from self-employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerce</td>
<td>430</td>
<td>1,400</td>
<td>23.0</td>
<td>42.8</td>
<td>0.30</td>
</tr>
<tr>
<td>Wholesale</td>
<td>490</td>
<td>2,670</td>
<td>11.8</td>
<td>38.8</td>
<td>0.18</td>
</tr>
<tr>
<td>Retail</td>
<td>260</td>
<td>690</td>
<td>54.7</td>
<td>58.7</td>
<td>0.37</td>
</tr>
<tr>
<td>Services</td>
<td>320</td>
<td>1,400</td>
<td>9.5</td>
<td>29.7</td>
<td>0.23</td>
</tr>
<tr>
<td>Social</td>
<td>290</td>
<td>2,670</td>
<td>3.5</td>
<td>23.0</td>
<td>0.10</td>
</tr>
<tr>
<td>Business</td>
<td>610</td>
<td>2,850</td>
<td>11.2</td>
<td>33.2</td>
<td>0.21</td>
</tr>
<tr>
<td>Recreational</td>
<td>260</td>
<td>1,220</td>
<td>6.7</td>
<td>22.7</td>
<td>0.21</td>
</tr>
<tr>
<td>Personal</td>
<td>250</td>
<td>840</td>
<td>15.6</td>
<td>34.4</td>
<td>0.30</td>
</tr>
</tbody>
</table>

1 Labour income from self-employment is estimated on the assumption that it is 85 per cent of net profits for commerce and 90 per cent of net profits for services. These are very rough estimates.


value added. This is true also of transport. Since the period is so short, the data cannot be regarded as anything more than an illustration of rough orders of magnitude.

We have made a rough attempt to estimate labour income from self-employment for a comparison with earnings from wage employment. We assumed that in commerce, labour income from self-employment is 85 per cent of total net profits (before tax), whereas it is 90 per cent of net profits before tax in the case of miscellaneous services. No doubt the choice of these percentages is arbitrary. However, earlier estimates by Fuchs ¹ seem to suggest that such improvisation is not unreasonable. Tables 88 and 89 give these estimates by major groups of services and commerce, including a detailed breakdown for retailing, where the importance of self-employment is in principle relatively greater.

It is interesting to note that in all cases, labour income per self-employed person is much higher than average wage earnings per employee, with the result that the ratio of the latter figure to the former is invariably very small. It is possible that our estimation procedure leads to an exaggeration of labour income from self-employment. Yet, in order to achieve approximation to parity between income from self-employment and that from wage employment, it would have to be assumed that income from self-employment is much lower than 85 or 90 per cent of net profits. This seems to be equally implausible in personal services and in retailing, in which the importance of fixed capital may be relatively limited.

Under equilibrium, the allocation of labour between wage and non-wage components, assuming perfect substitutability, should result in equality between

Employment, incomes and equality

Table 89. Self-employment and wage employment in retailing, 1966

<table>
<thead>
<tr>
<th>Branch of retailing</th>
<th>Labour cost per employee (£)</th>
<th>Labour income per self-employed person (£)</th>
<th>Share of labour income in total earnings (per cent)</th>
<th>Ratio of self-employed persons to wage earners (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food, drink and tobacco</td>
<td>220</td>
<td>440</td>
<td>59.3</td>
<td>72.6</td>
</tr>
<tr>
<td>Oil and petrol</td>
<td>200</td>
<td>1 060</td>
<td>36.0</td>
<td>10.4</td>
</tr>
<tr>
<td>Textiles and clothing</td>
<td>300</td>
<td>720</td>
<td>67.8</td>
<td>88.3</td>
</tr>
<tr>
<td>Hardware, building materials and timber</td>
<td>280</td>
<td>1 620</td>
<td>61.8</td>
<td>28.5</td>
</tr>
<tr>
<td>Pharmaceuticals and photography</td>
<td>600</td>
<td>3 400</td>
<td>17.2</td>
<td>3.6</td>
</tr>
<tr>
<td>General retailing</td>
<td>220</td>
<td>820</td>
<td>69.3</td>
<td>60.2</td>
</tr>
<tr>
<td>Other</td>
<td>330</td>
<td>1 020</td>
<td>58.1</td>
<td>44.8</td>
</tr>
</tbody>
</table>

\(^1\text{Labour income from self-employment is derived from net profit by assuming that it is 85 per cent of total net profits in each retail industry.}\)


earnings of the self-employed and the wage earners. Under Kenyan conditions, a wide disparity in these earnings and the relatively larger labour incomes from self-employment in services may partly reflect serious market imperfections and restrictions to self-employment through rigid licensing practices and similar statutory regulation. The higher earnings in self-employment than in wage-earning jobs would in principle reflect a limited capacity of the services sector to absorb additional labour in self-employment if the existing restrictions continue. The imperfect nature of competition in professional services and commerce is not peculiar to Kenya: in general, the imperfections result from restrictive practices and from custom, with the result that more or less the same service is offered at different prices in different localities.

Information on Kenya dates back to 1966, the year during which the censuses of distribution and services were taken. More recent comparable information for services is not available. The latest census of distribution was taken in 1968, only two years after the previous one, and consequently does not give an adequate picture of the change in the relative importance of self-employment and its share in incomes. Neither is the census of distribution for 1960 comparable with that for 1966. While the 1960 survey excluded all firms with a turnover of £1,000 or less and all firms with no paid employees, the 1966 survey included them. Although there cannot be much quarrel with the widening of coverage over time, needs of consistency and comparability demand that the items newly included be shown separately so that comparisons with earlier surveys may be possible.

The census of distribution for 1968 does not give separate data for the employees and self-employed. However, the figures taken from the annual enumeration of employees and the self-employed show that the ratio of self-employed to wage labour has increased considerably in both wholesale and retail trade.
TRANSPORT

Licensed sector

The Development Plan for the period 1966-70 projected an annual increase in employment of only about 2 per cent per annum, as compared with an increase of about 7 per cent in gross domestic product, thus implicitly providing for a productivity increase of about 5 per cent per annum. However, as table 90 indicates, the actual trend of employment over 1968-70 was negative: it declined by over 12 per cent. This decline was due mainly to a reduction in employment in rail transport, particularly in the East African Railways and Harbours, which alone accounted for 67 per cent of the decline. In 1969, the headquarters of the harbours, posts and telecommunications corporations of the East African Community moved out of Kenya. This partly accounted for the reduction in public employment. Some decline in employment on the railways can also be attributed to the increased competition from road transport, which witnessed an increase in employment during the 1968-70 period. Under the Second Development Plan (1970-74) it is contemplated that transport employment should grow at an annual average of 8.2 per cent, as against a rate of increase of 9.8 per cent in the gross domestic product over the 1968-74 period. This compares favourably with the rate of growth of only 3.1 per cent in over-all average employment, and of 5.2 per cent in tertiary employment.¹

The over-all decline in transport employment does not seem to have occurred because of a rapid increase in average earnings. Over the 1968-70 period, an 11.4 per cent increase in employment in total transport and storage corresponded to a decline in average earnings of about 19.6 per cent. In railway transport, the employment decrease was accompanied by a decline in average earnings, whereas water transport recorded a 2.8 per cent decline in employment with a 16.7 per cent increase in average earnings. Road transport recorded the largest output increase, accompanied by an increase of both employment and average earnings, which rose much more slowly than the productivity increase (see table 91). Since the output figures are gross receipts, care needs to be taken in interpreting high productivity figures in some sub-sectors of transport. Besides, in view of the inter-sectoral differences in depreciation rates, comparisons between sub-sectors are difficult. Also, the time period considered is too short to give an indication of longer-term trends of growth in employment and earnings.

The slow growth of employment compared to the rapid growth of output in different types of transport could in principle have been due to several factors making for productivity growth. We notice that rapid productivity increases in some sub-sectors of transport are not necessarily attributable to increases in wages. Instead, they may have been due to increases in net investments, fuller utilisation of capital and labour capacity, and increasing experience of the workforce already employed. Investment in transport and communication in the private sector is expected to more than double by 1974, from £8.1 million in 1967 to £20.9 million at 1967 prices. In the public sector

¹ Development plan for the period 1970 to 1974, p. 108.
Table 90. Employment and earnings in large-scale public and private transport and communications, 1968–70

<table>
<thead>
<tr>
<th>Sector</th>
<th>Employment</th>
<th>Average earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number employed (thousands)</td>
<td>Percentage change</td>
</tr>
<tr>
<td>East African Railways and Harbours administration</td>
<td>1.82</td>
<td>1.45</td>
</tr>
<tr>
<td>Railway transport</td>
<td>14.12</td>
<td>14.40</td>
</tr>
<tr>
<td>Road passenger transport except omnibus operators</td>
<td>5.07</td>
<td>5.10</td>
</tr>
<tr>
<td>Road transport not elsewhere classified</td>
<td>4.96</td>
<td>5.83</td>
</tr>
<tr>
<td>Ocean transport except in coastal waters</td>
<td>0.49</td>
<td>0.58</td>
</tr>
<tr>
<td>Water transport except ocean transport</td>
<td>12.75</td>
<td>12.77</td>
</tr>
<tr>
<td>Air transport</td>
<td>3.58</td>
<td>4.41</td>
</tr>
<tr>
<td>Services incidental to transport</td>
<td>3.81</td>
<td>2.96</td>
</tr>
<tr>
<td>Storage and warehousing</td>
<td>1.37</td>
<td>1.48</td>
</tr>
<tr>
<td>Communications</td>
<td>2.14</td>
<td>2.22</td>
</tr>
<tr>
<td>East African Posts and Telegraphs central administration</td>
<td>1.12</td>
<td>0.55</td>
</tr>
<tr>
<td>Total transport and communications</td>
<td>51.26</td>
<td>51.79</td>
</tr>
</tbody>
</table>

Sources: Annual enumeration of employees, and economic surveys.
Table 91. Percentage increases (or decreases) in output, employment, productivity and average earnings in large-scale transport and communications, 1968–70

<table>
<thead>
<tr>
<th>Sector</th>
<th>Output</th>
<th>Employment</th>
<th>Productivity</th>
<th>Average earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railway transport</td>
<td>5.3</td>
<td>-29.1</td>
<td>48.1</td>
<td>-16.7</td>
</tr>
<tr>
<td>Road transport</td>
<td>35.6</td>
<td>4.8</td>
<td>29.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Water transport</td>
<td>16.0</td>
<td>-2.8</td>
<td>20.2</td>
<td>16.7</td>
</tr>
<tr>
<td>Air transport</td>
<td>16.1</td>
<td>15.4</td>
<td>0.6</td>
<td>6.7</td>
</tr>
<tr>
<td>Services incidental to transport (including storage)</td>
<td>-2.4</td>
<td>-32.8</td>
<td>45.6</td>
<td>-29.4</td>
</tr>
<tr>
<td>Total transport and storage</td>
<td>16.6</td>
<td>11.4</td>
<td>4.9</td>
<td>-19.6</td>
</tr>
<tr>
<td>Communications</td>
<td>25.7</td>
<td>-21.1</td>
<td>59.1</td>
<td>12.7</td>
</tr>
</tbody>
</table>

Sources: Output data which represents total receipts are taken from the Economic Survey for 1971. Employment and earnings data are taken from the Annual enumeration of employees.

Gross fixed capital formation is planned to rise from £8.6 million in 1967 to £10.1 million in 1974. The growth of road transport has been particularly rapid in the past few years as a result of heavy government investment in road building.

Expenditure on roads was about £9.3 million during 1969–70, and during 1970–71 it was expected to rise to £10.4 million. In principle, this relatively fast expansion of road transport should raise employment growth more rapidly. In fact, slow employment growth seems to be mainly due to the Government’s restrictive policy on licensing of road traffic.

Road licensing in Kenya dates back to the 1930s. One of the earliest objectives of road licensing was to restrict the expansion of road transport in order to protect the railways, which at one time enjoyed a monopoly. In 1932, for the first time, the Carriage of Goods by Motor Ordinance restricted the operation of goods vehicles to prevent direct competition with the railways. The latter, having had a monopoly of transport in the early days, entered into spheres where they did not have a clear competitive advantage over road transport, e.g. short haulage, instead of concentrating on long haulage and bulk transport where they have a comparative advantage. The rationale for road regulation was to protect the railways’ “differential” tariff policy under which imported goods (carried, for example, from Mombasa to Nairobi) were higher rated than goods going outwards. Restrictions on road transport, therefore, meant the control of vehicle operations on routes running parallel to the railways, within a distance of 30 miles.

The result of road regulations and restrictions has been to slow the growth of the labour-intensive road transport and trucking industry, in spite of rapid economic and industrial growth. In the neighbouring country of Tanzania, which also practised restrictive road transport licensing, the number of lorries increased, whereas in Kenya it fell. This is illustrated in table 92, which does not go beyond 1965 because after 1964 the Tanzanian position is distorted by the increase in road transport facilities required to carry oil from Tanzania to Zambia.
Employment, incomes and equality

Table 92. Indices of numbers of lorries and of gross domestic product in Kenya and Tanzania, 1956–65

<table>
<thead>
<tr>
<th>Year</th>
<th>Tanzania</th>
<th></th>
<th>Kenya</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lorries</td>
<td>Gross domestic product</td>
<td>Lorries</td>
<td>Gross domestic product</td>
</tr>
<tr>
<td>1956</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1957</td>
<td>103</td>
<td>106</td>
<td>101</td>
<td>107</td>
</tr>
<tr>
<td>1958</td>
<td>108</td>
<td>110</td>
<td>100</td>
<td>107</td>
</tr>
<tr>
<td>1959</td>
<td>114</td>
<td>116</td>
<td>100</td>
<td>111</td>
</tr>
<tr>
<td>1960</td>
<td>108</td>
<td>122</td>
<td>100</td>
<td>117</td>
</tr>
<tr>
<td>1961</td>
<td>112</td>
<td>127</td>
<td>100</td>
<td>116</td>
</tr>
<tr>
<td>1962</td>
<td>115</td>
<td>137</td>
<td>98</td>
<td>126</td>
</tr>
<tr>
<td>1963</td>
<td>120</td>
<td>147</td>
<td>97</td>
<td>134</td>
</tr>
<tr>
<td>1964</td>
<td>129</td>
<td>158</td>
<td>95</td>
<td>146</td>
</tr>
<tr>
<td>1965</td>
<td>129</td>
<td>161</td>
<td>94</td>
<td>149</td>
</tr>
</tbody>
</table>


One of the reasons for the relative decline in the number of lorries in Kenya as compared to the number in Tanzania may be the fact that road competition with the railways is more restricted, being limited to short hauls of 30 miles, as compared with 60 miles in Tanzania.\(^1\)

However, some liberalisation of road licensing has taken place since July 1967. In that year, licences for main trunk routes, e.g. Mombasa-Nairobi, were issued more freely. That action seems to have raised road transport employment at the expense of employment on the railways.

Non-licensed sector

The growth in the number of matatus, or unlicensed taxis, seems to have taken place in response to rapidly rising demand for cheap public transport. After the attainment of national independence in 1963, the lifting of restrictions on the movement of low-income African population to Nairobi generated a demand which was only partly met by the monopoly Kenya Bus Services Ltd. Besides, under monopoly conditions, public transport had no incentive to provide cheaper service. The unlicensed taxis filled the gap by operating outside the law and were thus in a position to undercut other means of public transport. It is estimated that in Nairobi the “mobile” matatus, operating along a particular route, charge a flat rate of 40 cents per trip, irrespective of the distance travelled. Although this rate may not be much lower than that of official (licensed) public transport, it is certainly much below the licensed taxi fares. It is believed that the licensed taxis lose more by the competition of the

\(^1\) The decline in the number of lorries does not necessarily imply a decline in fleet carrying capacity, which in Kenya has increased, though not to the same extent as in Tanzania. The growth of fleet capacity is not as conducive to employment creation as an increase in the number of vehicles.
Table 93. Outward journeys of unlicensed taxis plying along particular routes ("mobile" matatus) in Nairobi, 1971

<table>
<thead>
<tr>
<th>Route</th>
<th>No. of journeys</th>
<th>No. of passengers</th>
<th>Average occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landhies Road</td>
<td>80</td>
<td>1,536</td>
<td>19</td>
</tr>
<tr>
<td>Salisbury Road</td>
<td>16</td>
<td>287</td>
<td>18</td>
</tr>
<tr>
<td>Digo Road</td>
<td>11</td>
<td>148</td>
<td>13</td>
</tr>
<tr>
<td>Juja Road</td>
<td>14</td>
<td>232</td>
<td>17</td>
</tr>
<tr>
<td>Limuru Road</td>
<td>35</td>
<td>352</td>
<td>10</td>
</tr>
<tr>
<td>Fort Hall Road</td>
<td>60</td>
<td>480</td>
<td>8</td>
</tr>
<tr>
<td>All routes</td>
<td>216</td>
<td>3,035</td>
<td>14</td>
</tr>
</tbody>
</table>

Source: Lan Situma and Michael Mogridge: *A study of pirate taxi (matatu) operations in Nairobi*, op. cit.

Matatus than the government bus transport, especially because both licensed and non-licensed taxis tend to operate on the same routes. Regular matatu passengers who were questioned by the Urban Study Group also indicated that they could in some cases obtain credit facilities (enabling them to pay at the end of every month on receipt of their salaries). The "stationary" matatus (about 317 operating from fixed terminals in Nairobi) operate at fares roughly half those of the yellow band taxis providing a similar service on a legal basis.

In terms also of the number of passengers carried and of daily trips made, the matatus perform a useful economic activity. According to a rough count, the "stationary" matatus carry about 5,100 passengers a day (1,900 journeys and 2.7 persons per vehicle). Table 93 shows that the "mobile" matatus carry about 3,000 passengers per day for about 216 journeys.

The consumer preference for the cheaper matatu is indicated by the fact that, on several occasions, passengers have protected their driver against the police by arguing that they were friends. Other reasons given for the use of matatus are the inadequacy of Nairobi public transport owing to the monopoly of Kenya Bus Services Ltd., and the long delays and waiting involved.¹

Matatus compete with the public bus transport monopoly mainly in areas where there is heavy traffic at peak hours and where the transport companies make big profits. There are hardly any matatus in areas where these companies are not making profits.

Thus, from the point of view of income generation, income redistribution and employment, the non-licensed taxis and buses are performing an important economic role.

Despite the economic role of the non-licensed vehicles, legislation and standards laid down by the Government are too restrictive with respect to them. The attitude of the Government towards non-licensed taxis and buses tends to be severe, on the grounds that the vehicles are not roadworthy and cause frequent road accidents. While it is true that the road accident rate is very high throughout Nairobi and other parts of the country, it is by no means

clear that the accidents are not due to other factors. For instance, much of the explanation for the accidents lies in the “insufficient attention being paid to the relationship between vehicular and pedestrian movements at the design stage”. Besides, traffic congestion restricts bus operations and rapid movement. Road improvements in the past have not been designed to deal with increased traffic, for example.

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Expenditure on maintenance and repairs is both a recurrent and a development expenditure. In economies where capital is scarce, optimum utilisation of the total stock of capital assets requires a proper balance between expenditure on the replacement of obsolete equipment and creation of new equipment on the one hand, and the repairs and maintenance of the stock of assets on the other. Resources devoted to repairs and maintenance represent a productive investment, which enables a prolongation of the useful life of equipment and thus reduces the otherwise extreme capital scarcity.

There are various problems of employment policy and technological choice in repair and maintenance operations, namely:

1. Variations in the amount of maintenance and repair required as a result of the substitution of labour-intensive for capital-intensive techniques. Does higher labour intensity (for example, with machines of an older vintage) result in greater repair and maintenance requirements? Are greater repair and maintenance requirements due to more frequent breakdown of labour-intensive machines? If maintenance costs are higher, are they due to low labour efficiency, to the high cost of spare parts and to top-heavy management, or to the technical nature or degree of wear of labour-intensive machines? How are machine utilisation rates affected by high maintenance costs and frequent breakdowns?

2. The provision of additional repair and maintenance facilities and its effect on employment generation and the reduction in the price charged for maintenance and repair operations. The industries which require a large degree of repair and maintenance will tend to show a smaller share of materials in total output, and a larger share of gross value added in output. Is the ratio of employment to value added in those industries higher than in those where value is a smaller proportion of total output?

Capital scarcity in Kenya is also being overcome by the re-use of scrap equipment and materials (e.g. car body frames, spare parts, tyres and tubes) in the manufacture of such finished products as shoes, beds, charcoal stoves, pots and pans, and tin cans. While the value of scrap or waste material might be zero in an advanced economy, it is positive in an economy like that of Kenya. The use of scrap material for production has obvious implications for the analysis of capital formation and the accounting price of capital.
(3) Working capital requirements of repair and maintenance operations. Import licensing procedure and delays in delivery of imported spare parts may result in higher requirements for working capital, and hence for total capital.

(4) The effect of organisational structure and nature of ownership (e.g. partnership, individual ownership, corporations) on the choice of techniques and the provision of repair and maintenance facilities. Transport techniques may also be affected by the form of organisation. For example, in Egypt there was a shift from a large corporation to owner-operated trucking in order to stimulate better maintenance and other aspects of efficient operation.

A crude attempt is made below to examine some of the above questions with reference to maintenance in Kenyan transport as compared with manufacturing proper.

In the Kenyan census and surveys of industrial production, no data are available on fixed and working capital, either by industry or for the manufacturing sector as a whole.1 In the absence of such information, the physical labour input per unit of value added and the share of labour costs in value added are used as crude indices of the relative capital intensity or labour intensity of industry. In order to compare manufacturing with repair and maintenance work, we have arbitrarily chosen the following industries: non-electrical and electrical machinery and motor vehicle bodies and metal products for the manufacturing sector, and motor vehicle repairs, aircraft repairs and railway rolling stock repairs for the repair and maintenance sector.

Table 94 shows the relative labour intensity by industry measured by (a) the labour coefficient (number of persons engaged in production per £1,000 of value added) and (b) the percentage share of labour costs in value added.

Labour input per unit of net value added is the highest in railway rolling stock repairs. Next to it comes motor vehicle bodies. The lowest ratio occurs in aircraft repairs. With the exception of electrical machinery, no difference is made to the order if gross value added is taken as a denominator instead of net value added. This does not hold good if we look at the shares of labour costs. The order of the branches or sectors varies according to whether we take net or gross value added. For example, in the case of aircraft repairs, the share of labour costs exceeds that in railway rolling stock repairs if net value added is taken to measure the ratio; it does not if gross value added is considered.

The share of labour costs in value added is only a very crude measure of labour intensity. This is demonstrated by the figures in table 94. According to the labour coefficient, aircraft repairs is the least labour-intensive of all the sectors considered; superficially, however, the share of labour costs would indicate a very high degree of labour intensity. One needs caution in making deductions about relative labour intensity or capital intensity from the share of labour costs. In principle, this indicator is a true measure of labour intensity under the assumptions of perfect competition in factor and product markets.

1 In addition, the composition of the series is not very consistent over time. For example for the year 1967 alone, data are available for large and small establishments (in other words, all establishments employing five or more workers), whereas surveys and censuses for other years cover large establishments only.

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Table 94. Degree of labour intensity in establishments employing 50 or more workers in selected branches of manufacturing and sectors of repair and maintenance activity, 1969

<table>
<thead>
<tr>
<th>Branch or sector</th>
<th>Labour coefficient 1 in relation to—</th>
<th>Percentage share of labour costs in—</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>net value added</td>
<td>gross value added</td>
</tr>
<tr>
<td></td>
<td>( \frac{L}{V_n} )</td>
<td>( \frac{L}{V_g} )</td>
</tr>
<tr>
<td>Manufacturing:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-electrical machinery</td>
<td>1.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>1.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Motor vehicle bodies</td>
<td>2.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Metal products</td>
<td>1.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Repair and maintenance:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>1.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Aircraft</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Railway rolling stock</td>
<td>3.5</td>
<td>3.4</td>
</tr>
</tbody>
</table>

1 Number of persons engaged in production per £1,000 of value added.


and of scale independence, and on the assumption that the elasticity of substitution of labour for capital is greater than 1. However, in practice in Kenya as in any other developing country, wage differentials between industries and variations in the degree of monopolistic competition tend to distort the share of labour costs in value added which we use as a measure of labour intensity. The labour coefficient also suffers from the same limitations.

In Kenya, annual labour costs per person engaged in production vary from £267 in railway rolling stock repairs to £1,033 in aircraft repairs. The average for the manufacturing sector as a whole (both large and small establishments) comes to £365. The fact that the wage rate in aircraft repairs is about three times the average seems to be due to the high degree of skill needed, in addition to the very large scale of establishments. This accounts for the very low labour coefficient as well as the small number of persons employed: 863 against 6,900 in railway rolling stock repairs (see table 97). The inter-industry variations in the two indicators of labour intensity are due partly to skill differentials and partly to scale variations and the difference in organisational patterns. In order to isolate the importance of variations due purely to the technical or engineering nature of processes in manufacturing or repairs and maintenance, some indication of the labour market imperfections due to unionisation or economies or diseconomies of scale is necessary. The 1967 census of industrial production gives a separate breakdown for large establishments. Comparing this to figures for all establishments, large and small, we find that only 17 out of a total of 143 establishments for motor vehicle repairs are large. In the case of aircraft repairs and railway rolling stock repairs, there are no small establishments. The preponderance of small units in motor vehicle repairs raises the
Employment, incomes and equality

Table 95. Percentage changes in labour intensity, employment and labour cost per person engaged in production in establishments engaged in transport repair and maintenance and employing 50 workers or more, 1965–69

<table>
<thead>
<tr>
<th>Kind of transport equipment</th>
<th>Labour cost per person engaged in production</th>
<th>Number of persons engaged in production</th>
<th>Labour coefficient ¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor vehicles</td>
<td>25.0</td>
<td>28.6</td>
<td>-33.4</td>
</tr>
<tr>
<td>Aircraft</td>
<td>33.2</td>
<td>26.2</td>
<td>-33.4</td>
</tr>
<tr>
<td>Railway rolling stock</td>
<td>—</td>
<td>13.2</td>
<td>+13.3</td>
</tr>
<tr>
<td>Bicycles ²</td>
<td>—</td>
<td>15.5</td>
<td>—</td>
</tr>
</tbody>
</table>

= nil.

¹ Number of persons engaged in production per £1,000 of value added.
² 1968–70.


labour coefficient from 1.2 to 1.4, as it lowers the labour cost per person engaged in production from £512 to £438. Given the share of profits in value added, the share of labour will depend on the relative magnitudes of the wage rate and the amount of labour employed.

If the actual wage is much higher than the equilibrium wage (which could be the case in some industries with strong unionisation) then the wage bill is large owing to the high wage rate, which militates against greater employment by causing the mechanisation of manufacturing and repair operations. Given the wage rate, additional employment can occur only at the expense of profits.

A comparison of motor vehicle body manufacture with motor vehicle repair and maintenance shows that the former is much more labour-intensive, with a labour coefficient of 2, as compared with only 1.4 in motor vehicle repair and maintenance (see table 97).

Some indication of labour market imperfections and of the effects of unionisation in different industries can be obtained from the movements of labour cost per person engaged in production, and of employment over time. Table 95 gives the percentage change in employment and labour costs in transport repair and maintenance between 1965 and 1969. Table 96 gives annual figures and more detail, including figures for manufacturing.

It is interesting to note that in the repair of railway rolling stock, the labour cost per person engaged in production remained constant throughout the 1965–69 period. For motor vehicle repairs and aircraft repairs, it rose consistently from 1965 until 1968. The constancy of labour cost per person engaged in production in the former case is quite exceptional and rather difficult to explain. One reason may be the effectiveness of trade union activity. It can also be argued that the growth of productivity as workers become more experienced is perhaps minimal, so that there is little justification for a rise in wages. This hypothesis may also explain the rise in the labour coefficient. On the other hand, the process of skill formation on the job in aircraft repairs and motor vehicles may be much more rapid, and hence cause a continuous rise in the wage rate.

Clearly, changes in the labour coefficients (as shown in table 94) cannot give a true picture of the possibilities of substituting labour for capital or
Table 96. Variations in labour intensity, employment and labour cost per person engaged in production in selected manufacturing, repair and maintenance establishments employing 50 workers or more, 1965–69

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of establishments</th>
<th>Number of persons engaged in production</th>
<th>Labour cost per person engaged in production (£)</th>
<th>Percentage share of labour cost in gross value added</th>
<th>Labour coefficient $L \over \overline{Y}$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturing:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-electrical machinery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>5</td>
<td>329</td>
<td>569.9</td>
<td>111.9</td>
<td>1.9</td>
</tr>
<tr>
<td>1966</td>
<td>6</td>
<td>471</td>
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<td>503</td>
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<tr>
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<tr>
<td>1969</td>
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<td>639</td>
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<td>Metal products</td>
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<td>1965</td>
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<td>2,548</td>
<td>294.3</td>
<td>49.3</td>
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<td>8</td>
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<td>2,611</td>
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<tr>
<td>1969</td>
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<tr>
<td><strong>Repair and maintenance:</strong></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicles</td>
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<tr>
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<td>2,729</td>
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<td>2,922</td>
<td>511.8</td>
<td>60.5</td>
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<td>3,557</td>
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<td>56.3</td>
<td>1.0</td>
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<tr>
<td>1969</td>
<td>18</td>
<td>3,514</td>
<td>471.1</td>
<td>58.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Aircraft</td>
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<td></td>
</tr>
<tr>
<td>1965</td>
<td>2</td>
<td>785</td>
<td>811.6</td>
<td>96.9</td>
<td>1.2</td>
</tr>
<tr>
<td>1966</td>
<td>2</td>
<td>820</td>
<td>911.1</td>
<td>92.0</td>
<td>1.0</td>
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<tr>
<td>1967</td>
<td>2</td>
<td>863</td>
<td>1,032.6</td>
<td>87.3</td>
<td>0.8</td>
</tr>
<tr>
<td>1968</td>
<td>2</td>
<td>951</td>
<td>1,035.3</td>
<td>90.3</td>
<td>0.8</td>
</tr>
<tr>
<td>1969</td>
<td>2</td>
<td>991</td>
<td>1,081.3</td>
<td>87.3</td>
<td>0.8</td>
</tr>
</tbody>
</table>

1 Number of persons engaged in production per £1,000 of value added.

(Table concluded overleaf)
Employment, incomes and equality

Table 96. (Concl.).

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of establishments</th>
<th>Number of persons engaged in production</th>
<th>Labour cost per person engaged in production (£)</th>
<th>Percentage share of labour cost in gross value added</th>
<th>Labour coefficient¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railway rolling stock</td>
<td>1</td>
<td>6 550</td>
<td>266.6</td>
<td>79.6</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>6 568</td>
<td>257.0</td>
<td>80.4</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>6 900</td>
<td>266.5</td>
<td>88.5</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>7 215</td>
<td>266.5</td>
<td>88.3</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>7 417</td>
<td>266.5</td>
<td>89.9</td>
<td>3.4</td>
</tr>
</tbody>
</table>

¹ Number of persons engaged in production per £1,000 of value added.


unskilled labour for skilled labour. The data need to be purged of the factor and product market imperfections. As a crude cross-check, an attempt is made below to use depreciation on fixed assets as a proxy for capital costs. The ratios of these capital costs to labour costs are illustrated in table 98.

No conclusions can easily be drawn from the ratios in table 98. One interesting point that emerges, however, is that in some cases, e.g. aircraft repairs, the very low ratio seems to be due to very high skill intensity instead of physical capital intensity. This hypothesis is borne out by the very high share of labour costs in value added, and suggests quite clearly a case of substitution of human capital for physical capital. It also shows the inadequacy of the two-factor assumption and of subsuming human capital under physical capital instead of treating it as an independent factor.

According to the Development Plan for 1970–74, the transport equipment industry, which is at present the largest in terms of value added and employment, will grow at about 7 per cent per annum during the Plan period. With this rapid growth, a complementary growth of repair and maintenance of transport equipment is expected. However, it is contemplated under the Plan that such industries as the building and repair of railway rolling stock will grow more slowly, while others such as motor vehicle repair and ship building and repair are expected to grow faster.¹ A significant portion of this expansion is likely to be accounted for by the repair and maintenance workshops of the East African Community’s transport corporations. The growth in the demand for repair and maintenance facilities will also depend on the price to be paid for them. The cost of repair and maintenance may tend to be high since the bulk of the material used, e.g. spare parts, nuts and bolts, pipes and rods, is imported. Some indication of the imports of spare parts for repairs and maintenance is given by the figures in table 99.

Table 99 indicates a decline in the share of imports of spare parts for both motor vehicles and aircraft, whereas the increase in the share of imports of

Table 97. Indicators of labour intensity in manufacturing, repair and maintenance establishments of different sizes, 1967

<table>
<thead>
<tr>
<th>Sector</th>
<th>All establishments</th>
<th>Establishments employing 50 workers or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of</td>
<td>Number of persons engaged in production</td>
</tr>
<tr>
<td></td>
<td>establishments</td>
<td></td>
</tr>
<tr>
<td>Manufacturing:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-electrical machinery</td>
<td>50</td>
<td>1 143</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>22</td>
<td>2 671</td>
</tr>
<tr>
<td>Motor vehicle bodies</td>
<td>17</td>
<td>870</td>
</tr>
<tr>
<td>Metal products</td>
<td>52</td>
<td>3 088</td>
</tr>
<tr>
<td>Repair and maintenance:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>143</td>
<td>4 483</td>
</tr>
<tr>
<td>Aircraft</td>
<td>2</td>
<td>863</td>
</tr>
<tr>
<td>Railway rolling stock</td>
<td>1</td>
<td>6 900</td>
</tr>
<tr>
<td>Total</td>
<td>1 062</td>
<td>64 197</td>
</tr>
</tbody>
</table>

$^1$ Number of persons engaged in production per £1,000 of value added.

Source: Census of industrial production, 1967.
Employment, incomes and equality

Table 98. Ratio of capital costs to labour costs in selected sectors of manufacturing and repair work, 1967-69

<table>
<thead>
<tr>
<th>Sector</th>
<th>1967</th>
<th>1968</th>
<th>1969</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-electrical machinery</td>
<td>0.08</td>
<td>0.08</td>
<td>0.07</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>0.27</td>
<td>0.37</td>
<td>0.32</td>
</tr>
<tr>
<td>Motor vehicle bodies</td>
<td>0.04</td>
<td>0.05</td>
<td>0.06</td>
</tr>
<tr>
<td>Metal products</td>
<td>0.15</td>
<td>0.12</td>
<td>0.13</td>
</tr>
<tr>
<td><strong>Repairs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>0.21</td>
<td>0.23</td>
<td>0.26</td>
</tr>
<tr>
<td>Aircraft</td>
<td>0.12</td>
<td>0.08</td>
<td>0.10</td>
</tr>
<tr>
<td>Railway rolling stock</td>
<td>0.07</td>
<td>0.07</td>
<td>0.05</td>
</tr>
</tbody>
</table>


Table 99. Percentage share of imports of motor vehicles and aircraft and spare parts for them in total imports of transport equipment, 1968-70

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Motor vehicle parts</td>
<td>20.1</td>
<td>18.4</td>
<td>17.0</td>
<td>1.4</td>
<td>0.6</td>
<td>0.9</td>
<td>1.2</td>
<td>1.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Motor vehicles</td>
<td>35.5</td>
<td>37.0</td>
<td>36.5</td>
<td>1.1</td>
<td>0.7</td>
<td>0.8</td>
<td>18.8</td>
<td>20.8</td>
<td>24.7</td>
</tr>
<tr>
<td>Aircraft parts</td>
<td>1.7</td>
<td>1.6</td>
<td>1.6</td>
<td>20.1</td>
<td>19.3</td>
<td>23.9</td>
<td>10.1</td>
<td>9.5</td>
<td>9.0</td>
</tr>
<tr>
<td>Aircraft</td>
<td>3.6</td>
<td>5.2</td>
<td>10.8</td>
<td>10.5</td>
<td>42.7</td>
<td>42.4</td>
<td>6.7</td>
<td>21.8</td>
<td>21.3</td>
</tr>
</tbody>
</table>


Table 100. Percentage share of materials in total input for the repair of transport equipment, 1967-69

<table>
<thead>
<tr>
<th>Type of equipment</th>
<th>1967</th>
<th>1968</th>
<th>1969</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor vehicles</td>
<td>62.2</td>
<td>90.6</td>
<td>86.7</td>
</tr>
<tr>
<td>Aircraft</td>
<td>48.5</td>
<td>64.4</td>
<td>51.2</td>
</tr>
<tr>
<td>Railway rolling stock</td>
<td>90.8</td>
<td>35.7</td>
<td>32.8</td>
</tr>
</tbody>
</table>

*This figure does not appear to be reliable.


Motor vehicles and aircraft should be reflected in a growing demand for spare parts for repairs and maintenance. It is difficult to conclude from these figures whether the import licensing system and procedures discriminate against imports of spare parts and other intermediate products and favour the import of capital goods. However, we assume that this is so, even though the decline in
the share of imports of spare parts could be partly explained by import substitution, which is easier for simple tools and spare parts than for machinery and capital equipment in general.

Tentative estimates of the share of materials in total input suggest that import substitution may not have made up the shortage due to the decline in imports of spare parts (see table 100).

There may, however, be a number of other interpretations of the data in tables 98 and 99. First, the composition of the final product may have undergone a change. Secondly, the decline in the share of materials in total inputs may be due to some substitution of other inputs\(^1\), e.g. an improvement in managerial efficiency or administration, which results in the more rational and economic use of material.

\(^1\) The employers' representative for the sisal industry reported that prices of spare parts for agricultural machinery were too high for an average farmer. The result is that a large proportion of the machinery installed remains out of order for long periods, and there is an inducement to buy new machinery.
22. THE RELATION BETWEEN THE FORMAL AND INFORMAL SECTORS

The process of economic transformation and growth in Kenya has been marked by growing inequalities in the distribution of wealth and income among Africans. The usual explanation is the traditional-modern division of the economy, in which the westernised modern sector is the source of dynamism and change and the traditional sector slowly withers away. This view does not correspond to the reality of Kenya; we reject it for that reason, and because it ignores the dynamism and progressive elements indigenous to the Kenyan economy. We have considerable evidence to refute a view that attributes the sources of economic and social change almost exclusively to outside forces.

Furthermore, the traditional-modern analysis focuses only on the positive effects of the westernisation of the Kenyan economy and ignores the negative effects. In particular, it ignores inter-sectoral dynamics, which are the key to the employment problem. The accumulation of wealth in a small part of the modern sector is the consequence of the concentration of political power in that sector, and has given rise to the development of an impoverished and economically deprived modern sub-sector. The slums of Nairobi, Mombasa and to a lesser extent other urban areas are completely modern and due to the differences of wealth and income between different sectors of the economy. These differences draw migrants towards the concentrations, and bring about the modernisation of almost the entire economy, but not the spread of wealth. Because of the slow growth of high-wage employment, migration to urban areas by income seekers has led to the growth of a low-income periphery. This low-income sector is peripheral both literally and figuratively. In Nairobi it sprang up, and continues to grow, just outside the borders of the wealthy urban zone, to supply goods and services to the fortunate few inside that zone and to its own population. Figuratively, it is peripheral in that it has only fortuitous and restricted access to the sources of wealth.

Characteristics and dynamics of the informal sector

We describe these two urban sectors as being the “formal” and the “informal” sector. This designation is not intended to contribute to an academic proliferation of labels; we merely seek an analytical terminology to describe a duality that avoids the bias against the low-incomes sector inherent in the
Employment, incomes and equality

traditional-modern dichotomy. Both sectors are modern; both are the consequence of the urbanisation that has taken place in Kenya over the last 50 years. We might have used the terms "large-scale" and "small-scale", but those terms are purely descriptive and tell us nothing about why one sector is large-scale and the other is small-scale. An explanation of this is central to explaining and solving the employment problem in Kenya. One important characteristic of the formal sector is its relationship to the Government. Economic activities formally and officially recognised and fostered by the Government enjoy considerable advantages. First, they obtain the direct benefits of access to credit, foreign exchange concessions, work permits for foreign technicians, and a formidable list of benefits that reduce the cost of capital in relation to that of labour. Indirectly, establishments in the formal sector benefit immeasurably from the restriction of competition through tariffs, quotas, trade licensing and product and construction standards drawn from the rich countries or based on their criteria. Partly because of its privileged access to resources, the formal sector is characterised by large enterprise, sophisticated technology, high wage rates, high average profits and foreign ownership.

The informal sector, on the other hand, is often ignored and in some respects helped and in some harassed by the authorities. Enterprises and individuals within it operate largely outside the system of government benefits and regulation, and thus have no access to the formal credit institutions and the main sources of transfer of foreign technology. Many of the economic agents in this sector operate illegally, though often pursuing similar economic activities to those in the formal sector—marketing foodstuffs and other consumer goods, carrying out the repair and maintenance of machinery and consumer durables and running transport, for example. Illegality here is generally due not to the nature of the economic activity but to an official limitation of access to legitimate activity. Sometimes the limitations are flouted with virtual abandon, as in the case of unlicensed matatu taxis; sometimes the regulations are quite effective. The consequence is always twofold: the risk and uncertainty of earning a livelihood in this low-income sector are magnified, and the regulations ensure a high quality of services and commodities for the wealthy few at the expense of the impoverished many.

The formal-informal analysis applies equally well to the agricultural sector. The parallels are obvious and striking. The division between favoured operators with licences and those without in urban areas is reproduced in agriculture between those who grow tea and coffee with official sanction and those who do so illegally. Similarly, with other agricultural products such as beef, there are those whose wealth enables them to conform to and benefit from standards officially laid down, while others can make a livelihood only by contravening the regulations. In the agricultural sector extension services take the place of the industrial estates and of loans from the Industrial and Commercial Development Corporation in the urban areas: farmers whose wealth and income allow them to conform to and benefit from standards officially laid down, while others can make a livelihood only by contravening the regulations. In the agricultural sector extension services take the place of the industrial estates and of loans from the Industrial and Commercial Development Corporation in the urban areas: farmers whose wealth and income allow them to conform to and benefit from standards officially laid down, while others can make a livelihood only by contravening the regulations. In the agricultural sector extension services take the place of the industrial estates and of loans from the Industrial and Commercial Development Corporation in the urban areas: farmers whose wealth and income allow them to conform to and benefit from standards officially laid down, while others can make a livelihood only by contravening the regulations. In the agricultural sector extension services take the place of the industrial estates and of loans from the Industrial and Commercial Development Corporation in the urban areas: farmers whose wealth and income allow them to conform to and benefit from standards officially laid down, while others can make a livelihood only by contravening the regulations.

The most striking rural-urban parallel is with illegal rural squatters, who move unofficially on to land scheduled for resettlement and face a continual danger of eviction. Their similarity to urban squatters is obvious—both are irresistibly drawn to real or perceived sources of wealth, despite legal restrictions of access.
In the Introduction to this report we considered the characteristics, other than relation to the Government, that distinguish the informal sector from the formal. These characteristics of the informal sector, both agricultural and non-agricultural, result in low incomes for those who work in it. A natural consequence of these low incomes is that monetary exchanges within the informal sector are different in quality from those in the formal sector. A most important consequence of a low income is the primacy of risk and uncertainty. The loss a small farmer or a small entrepreneur can bear is disproportionately smaller than that which can be borne by a wealthy operator, particularly when the former has no access to institutionalised sources of credit. As a consequence, the entrepreneur in the informal sector must act continually to protect himself against risk. Accordingly he establishes semi-permanent relations with suppliers and buyers, frequently at the expense of his profits. For the same reason he may be hesitant to innovate, particularly in agriculture, for he cannot take the chance of failure. These characteristic behavioural responses are not inherent in the informal sector; they are adaptive responses to low income.

As pointed out in our report, a rate of increase of employment in the formal sector high enough to reduce the relative size of the informal sector seems to us to be beyond the bounds of possibility for the foreseeable future. An absolute reduction is much less likely still. On the basis of any reasonable calculation, the urban informal sector in 1985 will include a larger proportion of the urban labour force than it does today. We do not view this inevitable development with dismay, for we see in the informal sector not only growth and vitality, but also the source of a new strategy of development for Kenya. The workshops of the informal sector can provide a major and essential input for the development of an indigenous capital goods industry, which is a key element in solving the employment problem. The informal sector is not a problem, but a source of Kenya’s future growth. In addition, it is in its workshops that practical skills and entrepreneurial talents are being developed at low cost. Many of its enterprises are inefficient technically and economically, and will disappear in the process of growth; but this applies equally to the formal sector, where tariff and quota protection, access to capital goods below world market prices and other restrictions on competition perpetuate gross operating inefficiencies that go hand in hand with sophisticated technology.

Despite the vitality and dynamism we see in the informal sector, we do not delude ourselves that it will develop successfully under present conditions. Although it has the potential for dynamic, evolutionary growth, under the existing nexus of restrictions and disincentives, the seeds of involutionary growth have been sown. Unlike the determinants of growth of the formal sector, the determinants of the informal sector are largely external to it. The relevant question is not whether the informal sector is inherently evolutionary or involutionary, but what policies should be followed to cause evolutionary growth. Irrespective of policy changes, the informal sector will grow in the next 15 years. If policy continues as at present, the growth will be involutionary and the gap between the formal and informal sectors will widen. The employment problem will then be worse.

\[1\] See p. 94, footnote 2.
The purpose of this section is to identify the major factors determining employment in the informal sector. The model used is a simple identity rather than a behavioural model. The points may seem self-evident, but we feel it is useful to make them, because linkages between the small-scale, informal sector and other sectors of the economy have generally been ignored.

From the writings of economists on urban areas in poor countries it appears that the criterion authors use for dividing the urban economy is not the modernity of activities but their enumeration in government labour force surveys.\(^1\) The relation between the two urban sectors implicit in this analysis can be called the “residual” model. The residual model is based on the presumption that the informal sector is a reservoir of unemployment and marginally productive activity into which those who cannot obtain paid jobs in the formal sector sink, barely making ends meet by begging, hawking or embarking on petty crime. In short, the activities in this sector are seen as providing no economic service or commodity. The demand for labour in the sector is presumed to be static. Popular though this view is, we do not feel that it is particularly useful. It asserts \textit{a priori} a characteristic of the informal sector (unemployment) that can be determined only empirically. The mechanism of the residual model can be summarised briefly. The informal or “traditional” urban sector has a static demand for labour, or a demand for labour that is quite income-inelastic.\(^2\) Therefore, an increase in the number of persons seeking a living in the informal sector (for example, after a reduction of employment in the formal sector) merely drives down average earnings in that sector; and if average earnings are at subsistence level, the influx presumably results in unemployment. A further prediction of this type of model when it incorporates a rural sector is that if average earnings in the urban informal sector are not below those in rural areas, migration will result. Facts mentioned in the first part of the report cast doubt on this last prediction for Kenya.

This view of the informal sector ignores linkage effects and product substitution, which we feel are at present quite significant in Kenya, and should be strengthened in the future. To identify these linkages we use a four-sector model of the economy, which distinguishes between smallholder agriculture, the informal (non-agricultural) sector, the private formal sector and the government sector. The outputs of these sectors are \(X_1\), \(X_2\), \(X_3\) and \(X_4\) respectively.

\(^1\) “A more meaningful distinction than that of employed-underemployed-unemployed is between those employed in establishments employing five or ten workers which are usually covered in annual labour surveys . . . and the rest of the labour force. The larger establishments . . . can generally be characterised as modern-sector establishments, as opposed to the smaller-scale establishments which are better characterised as traditional. Employees in traditional establishments are generally underemployed under most definitions of the term, while modern sector employees can be thought of as fully employed . . .”. Charles R. Frank, Jr.: “The problem of urban unemployment in Africa”, in R. G. Ridker and H. Lubell (eds.): \textit{Employment and unemployment problems of the Near East and South Asia} (Delhi, Vikas, 1971), pp. 785-786.

\(^2\) This, of course, is also an empirical question, and the assumption of a low income elasticity of demand is rather arbitrary. The over-all income elasticity of demand for the output of the informal sector, for example, is sensitive to the distribution of income.
The output of the informal (non-agricultural) sector is by definition given by the following input-output row:

\[ X_2 = a_{21}X_1 + a_{22}X_2 + a_{23}X_3 + a_{24}X_4 + X_{2f} \]

The symbol \( a \) indicates input-use coefficients, and \( X_{2f} \) is the final demand for informal-sector output. From our observations and reading in Kenya we can make up a list of the most important goods and services supplied by the informal sector to itself and the other three sectors.

<table>
<thead>
<tr>
<th>Using sector</th>
<th>Goods and services supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agriculture</td>
<td>Grain-grinding, building materials, transport, marketing, repair and maintenance.</td>
</tr>
<tr>
<td>2. Informal</td>
<td>Furniture for commercial use, tools, transport, repair and maintenance.</td>
</tr>
<tr>
<td>3. Private formal</td>
<td>Marketing and distribution, transport, furniture, repair and maintenance.</td>
</tr>
<tr>
<td>5. Final demand</td>
<td>Clothing, prepared food, furniture, repair and maintenance.</td>
</tr>
</tbody>
</table>

In our report we have discussed in detail the ways of increasing the final demand for informal-sector products and strengthening linkages between the informal and other sectors. Here we restrict ourselves to a discussion of the most important parameters of identity (1) above. The strategy we have suggested for Kenya would have the effect in time of strengthening the linkages of the informal sector and fostering a dynamic growth of its final demand; this implies a shift in the composition of output from relatively capital-using to relatively labour-using production processes. In short, we foresee the production of certain types of commodities and services with more labour for a given level of output. This will not occur, of course (indeed, the reverse will occur), unless the present development strategy is radically altered.

Identity (1) can be solved for informal-sector output as follows:

\[ X_2 = \frac{1}{1-a_{22}} ( a_{21}X_1 + a_{22}X_2 + a_{23}X_3 + a_{24}X_4 + X_{2f} ). \]

If we assume the capital stock of the informal sector to be constant, then a change in \( X_2 \) production is—

\[ \Delta L_2 \frac{\Delta X_2}{\Delta L_2}, \text{ where } \frac{\Delta X_2}{\Delta L_2} \text{ is, at the limit, the marginal product of labour in the informal sector.} \]

This allows us to write (2) in terms of employment:

\[ \Delta L_2 = \frac{1}{1-a_{22}} \frac{\Delta L_2}{\Delta X_2} [ \Delta ( a_{21}X_1 + a_{22}X_2 + a_{24}X_2 + X_{2f} ) ]. \]
While extremely simple, (3) is useful in analysing the growth of employment in the informal sector.

It is obvious that an increase in any $X$ will increase employment in the informal sector if none of the input coefficients is zero. For a given increase in total output, the effect on employment in the informal sector is determined by the values of the coefficients and the composition of the increase in output in terms of $X_1, X_2, \ldots, X_{2F}$. The effect of the recommendations in the main report is—

(a) to increase the size of the coefficients; and

(b) to shift the composition of future increases in output towards the sectors where the coefficients are highest.

Even if steps are taken to induce the private formal sector and the Government to shift purchases of inputs towards sector 2, there are significant technological and consumer taste influences militating against success. The extent of potential linkages between sector 2 and sectors 3 and 4 (parameters $a_{23}$ and $a_{24}$) is strongly related to the nature and pace of technical change occurring outside Kenya. This, in turn, is related to the choice of products, particularly in sector 3. Sector 3 products, which require sophisticated technology for quality reasons (and constantly undergo labour-saving technical change), are unlikely to provide much scope for subcontracting or for intermediate inputs supplied by small producers. Thus the choice of products must be determined, as suggested in Chapter 9, either through the redistribution of income or through direct restrictions. In addition, active measures must be taken to increase the technical capacity of the informal sector to supply inputs.

The model used here needs to be elaborated along behavioural lines, and an attempt must be made to estimate the parameters. Data are lacking, though we have made very rough calculations, based on arbitrary but moderate assumptions, that indicate that the present situation in sectors 1, 2 and 3 and shifts in government purchases within the present structure of public demand imply an intermediate demand for sector 2 output of almost £70 million. This very rough calculation indicates that there is considerable scope for employment in the informal sector in Kenya. Further, we feel that this model, with an attempt to estimate its parameters, represents a more fruitful approach to an understanding of the informal sector than the analysis underlying the residual model.
If an employer has a post to fill, he is likely to assess the qualities he needs and to advertise accordingly. In the case of high-level posts he will interview, with little further reference, people who have what appear to be sound relevant qualifications, e.g. in the case of a new executive appointment, a first-class honours degree in business administration.

In this case the obtention of the qualifications is itself a gate to employment in the formal sector.

In general it is clear that in respect of some posts such qualifications as good honours degrees, good results in university entrance examinations and good school certificates in the right subjects (usually science, mathematics, technical subjects, English) and—possibly even more important—good results in vocational education tests based on the United Kingdom City and Guilds system act in this way.

But for many positions employers know that skills and knowledge are not so important as other qualities, e.g. dependability, potential for training, persistence, initiative and so forth. Further, in many cases any advertisement will generate many applications from people with similar qualifications, and in those circumstances to make a short list merely by taking the best grade points of a particular examination will be largely an arbitrary procedure.

In such circumstances wise employers begin to look for brokers. At least two types of broker are identified here.

First there is the educational broker. Employers often contact a school teacher, particularly at the secondary level and usually in a well established school, and give him a list of the qualities needed. The teacher, who is often the careers master, will then provide a short list with suitably detailed comments about the potential of each candidate.

The second type of broker is the family broker. He is probably much more significant at the very competitive lower levels of employment. Again the wise employer selects one or two persons he trusts, probably skilled workers, and asks them for suitable young people, whom they will probably have to train. In the normal course of events, such men will look to their extended families for suitable candidates, and again they will draw up a short list. Indeed, the good broker takes the matter much further than this: he actually coaches the candidates on how to react at the interview and in how to fill in the application.
form. In the ideal situation a close and complex relationship thus grows up between employer, broker and employee. The employer builds up his workforce effectively, and the broker gains prestige and the employee a new job in which he is obliged to prove himself to the broker.

To a large extent in the larger firms, the role of the broker has become partly institutionalised by the appointment of local personnel managers who in a sense act as super-brokers and therefore have considerable influence. It is, of course, possible to relate this process to nepotism and bribery, but clearly those practices should be treated as potential malfunctions in the system rather than as essential features of it.

From the point of view of a young jobseeker it is therefore very important to have links with good brokers: in other words, he should be part of a family network that has good brokers, and that can maintain contact with them and put pressure on them. Very clearly, family networks differ markedly in their respective capacity, and of course if this system worked perfectly the tendency would be for some family networks to progress at the expense of others: for the ability to place members in jobs would generate capital with which to buy land in the home area and pay school fees, thus providing work and income for the members of the family in the rural areas and ensuring a supply of new candidates for the openings obtained in the towns.

The foregoing description has been given in an attempt to put a little more clearly in perspective the route to employment and social mobility by examination or formal education, for while examinations remain very important for confirming the presence of scarce skills, e.g. mathematics, they are becoming less and less used as a selection device. The rapid increase in the number of certificates means that employers have to find a more sensitive mechanism, and hence they have recourse to brokers, using the possession of the certificate only to legitimise the choice they finally make.

Perhaps it should be pointed out that family networks do not in reality work perfectly. Under the current pressure for jobs in the formal sector, many potential brokers are avoiding this dubious role, and in consequence are putting family links under strain; peer groups now seem to provide the best basis for contacts and places to stay in Nairobi.
The Government has expressed its policy on social inequality of opportunity in a number of documents. Although the basic policy statements deal in general with social inequality, they imply that educational opportunity is central to the realisation of social equality. Inequality in education can be considered under several headings.

Lack of formal education

Government statistics suggest that about 64 per cent of children aged between 7 and 11 get into primary schools. However, given those who repeat their years and those who drop out, it may be that as many as 45 per cent of this age group do not get into the formal school system. In Central Province the rate of attendance at primary schools is probably as high as 80 to 85 per cent, but there are districts in other provinces where it is as low as 35 per cent. The young people who do not get into the primary-school system at all are the most obvious victims of inequality. Most of those denied opportunities in this way at the beginning of their lives are girls.

Primary education

The variation from province to province of enrolment in primary schools is shown in table 101.

Further analysis of access to schools clearly reveals that there is also inequality within the provinces. Enrolment in primary schools in Coast Province, for example, varied in 1969 as shown in table 102.
Table 101. Enrolment in primary schools by province, 1969

<table>
<thead>
<tr>
<th>Province</th>
<th>Provincial enrolment</th>
<th>Population of province as percentage of national population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Numbers</td>
<td>Percentage of national enrolment</td>
</tr>
<tr>
<td>Central</td>
<td>311 970</td>
<td>24.3</td>
</tr>
<tr>
<td>Coast</td>
<td>76 805</td>
<td>6.0</td>
</tr>
<tr>
<td>Eastern</td>
<td>269 652</td>
<td>21.0</td>
</tr>
<tr>
<td>Nairobi</td>
<td>60 944</td>
<td>4.8</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>3 301</td>
<td>0.3</td>
</tr>
<tr>
<td>Nyanza</td>
<td>206 462</td>
<td>16.1</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>183 233</td>
<td>14.3</td>
</tr>
<tr>
<td>Western</td>
<td>169 930</td>
<td>13.3</td>
</tr>
<tr>
<td>National</td>
<td>1 282 297</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Sources: Ministry of Education: *Annual report, 1969* and *1970*; and *Population census, 1969*.

Table 102. Primary-school enrolment by district in Coast Province, 1969

<table>
<thead>
<tr>
<th>District</th>
<th>Percentage of national enrolment</th>
<th>Population of district as percentage of national population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kilifi</td>
<td>1.5</td>
<td>2.8</td>
</tr>
<tr>
<td>Kwale</td>
<td>0.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Lamu</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Mombasa</td>
<td>1.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Taita/Taveta</td>
<td>1.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Tana River</td>
<td>0.3</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Sources: Ministry of Education: *Annual report, 1969*; and *Population census, 1969*.

The following comparison of provinces arranged in order of attainment and in order of reward in Kenyan primary schools is of some interest.

<table>
<thead>
<tr>
<th>Provinces in order of attainment (Proportion of candidates obtaining certificate of primary education)</th>
<th>Provinces in order of reward (Places in maintained secondary schools as proportion of school-age population (15-19))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nyanza</td>
<td>Central</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>Coast</td>
</tr>
<tr>
<td>Eastern</td>
<td>Western</td>
</tr>
<tr>
<td>Central</td>
<td>Nyanza</td>
</tr>
<tr>
<td>Western</td>
<td>Eastern</td>
</tr>
<tr>
<td>Coast</td>
<td>Rift Valley</td>
</tr>
</tbody>
</table>

The further comparison given below of provinces arranged in order of population of primary-school age and in order of proportion of primary-school population actually at school is also interesting.
Provinces in order of primary-school age population
- Nyanza
- Rift Valley
- Eastern
- Central
- Western
- Coast

Provinces in order of proportion of this population actually at school
- Central
- Eastern
- Western
- Nyanza
- Coast
- Rift Valley

Another example of inequality can be seen in the 1971 results of the examination for the certificate of primary education in Nairobi, where former European and Asian schools (mainly in Central and Western Division, excluding Kawagware and Kangemi) had better results than the schools in the Eastlands. In Nairobi pupils from the poorer areas (Eastlands, Kangemi and Kawagware) have fewer opportunities, even after entering the formal school system.

Educational opportunities are reduced in several ways for children in the poorer parts of the country. Natural disasters lead to drop-outs in poor districts. There are no explicit data on this, but local research workers constantly refer to it. There were many drop-outs in Kangundo and Matungulu in 1970 and in 1971, and in the Eastern, Coast and Rift Valley Provinces during the 1962 drought. Similarly, poorer districts attract regular pupils and those repeating their year from richer districts. Pupils from the latter migrate to the former and attempt to improve their chances of higher education. They move, for example, from Nakuru to Narok, from Embu and Meru to Marsabit and Isiolo, and from Taita and Mombasa to Kwale, Kilifi and Lamu. They generally move to repeat their year, though occasionally they are standard 6 pupils transferring in time for the certificate of primary education.

The proportion of its teachers that are qualified is not an absolute indication of the quality of a school, but the variations in this proportion shown in table 103 are certainly an additional factor in inequality of educational opportunity.

These figures do not reveal the concentration of the good teachers in some of the primary schools within provinces (for example Hospital Hill, Westland, St. George's Kilimani, Muthaiga and Lavington) and the low proportion of good teachers in poorer areas (for example Bahati, Uhuru, Pumwani and Kibera). The concentration of qualified teachers correlates well with success in the examination for the certificate of primary education and gives those in the richer schools better chances of entry into secondary schools.

Secondary education

The distribution by province of form 1 places in secondary schools, which is shown in table 104, is inequitable.

The proportion of enrolment in each province to national enrolment and to provincial population has been worked out from the 1969 annual report and census data. The results are given in table 105. If the second figures are taken as a crude opportunity index, Central Province is obviously
### Table 103. Percentage of qualified primary-school teachers by province, 1966 and 1970

<table>
<thead>
<tr>
<th>Province</th>
<th>1966</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>71.5</td>
<td>82.0</td>
</tr>
<tr>
<td>Coast</td>
<td>72.2</td>
<td>71.6</td>
</tr>
<tr>
<td>Eastern</td>
<td>60.8</td>
<td>66.2</td>
</tr>
<tr>
<td>Nairobi</td>
<td>91.5</td>
<td>93.8</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>78.3</td>
<td>82.8</td>
</tr>
<tr>
<td>Nyanza</td>
<td>59.2</td>
<td>74.4</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>70.0</td>
<td>83.3</td>
</tr>
<tr>
<td>Western</td>
<td>81.4</td>
<td>98.2</td>
</tr>
<tr>
<td>National</td>
<td>69.5</td>
<td>79.4</td>
</tr>
</tbody>
</table>


### Table 104. Entry into secondary education, by province and formal qualifications, 1969–70

<table>
<thead>
<tr>
<th>Province of pupil</th>
<th>1969</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Candidates with certificate of primary education</td>
<td>Form I places as percentage of population aged 15-19</td>
</tr>
<tr>
<td>Central</td>
<td>36 948</td>
<td>2.79</td>
</tr>
<tr>
<td>Coast</td>
<td>8 429</td>
<td>1.92</td>
</tr>
<tr>
<td>Eastern</td>
<td>29 560</td>
<td>1.53</td>
</tr>
<tr>
<td>Nairobi</td>
<td>6 085</td>
<td>5.35</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>227</td>
<td>0.16</td>
</tr>
<tr>
<td>Nyanza</td>
<td>30 708</td>
<td>1.32</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>22 063</td>
<td>1.25</td>
</tr>
<tr>
<td>Western</td>
<td>23 218</td>
<td>2.00</td>
</tr>
<tr>
<td>National</td>
<td>157 240</td>
<td>1.83</td>
</tr>
</tbody>
</table>

Sources: Ministry of Education: *Annual report, 1969;* and census data.

### Table 105. Provincial enrolment for secondary education, in relation to population and national enrolment, 1969

<table>
<thead>
<tr>
<th>Province</th>
<th>Enrolment as percentage of national total</th>
<th>Enrolment as percentage of provincial population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>23.4</td>
<td>1.60</td>
</tr>
<tr>
<td>Coast</td>
<td>9.1</td>
<td>1.12</td>
</tr>
<tr>
<td>Eastern</td>
<td>12.0</td>
<td>0.12</td>
</tr>
<tr>
<td>Nairobi</td>
<td>19.9</td>
<td>4.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Province</th>
<th>Enrolment as percentage of national total</th>
<th>Enrolment as percentage of provincial population</th>
</tr>
</thead>
<tbody>
<tr>
<td>North-Eastern</td>
<td>0.01</td>
<td>0.05</td>
</tr>
<tr>
<td>Nyanza</td>
<td>13.5</td>
<td>0.73</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>11.9</td>
<td>0.62</td>
</tr>
<tr>
<td>Western</td>
<td>10.2</td>
<td>0.88</td>
</tr>
</tbody>
</table>

doing well. The Coast Province figure is distorted by Mombasa. Similar calculations for 1970 show the same pattern. ¹

A sharp difference in success between aided and unaided schools can be seen in the fact that 63.5 per cent of candidates from aided schools and only 29.6 per cent from unaided schools obtained the East African certificate of education in 1970. ² It is also clear that there are differences in performance between national schools, local schools and Harambee schools that perpetuate regional inequalities.

Harambee perpetuates inequalities by forcing the Government to take over schools. The rich areas can obviously set up proportionately more Harambee schools: they benefit when these are taken over, and if the Government is to go on taking over Harambee schools as before, this will continue to increase the inequalities.

Higher secondary education

According to the Careers information sheet, 1971 of the Ministry of Education, there were 13 national higher schools (forms 5 and 6) in 1970. These are supposed to have a balanced intake of pupils from all provinces, but in practice, since they are concentrated round Nairobi, students from Central Province tend to dominate.

The same source gives 59 higher school certificate schools, distributed as follows: Coast Province, 5; Central Province, 15; Eastern Province, 7; Nairobi 12; Rift Valley Province, 4; Western Province, 8; Nyanza Province, 8. North-Eastern Province had none. In 1971 Central Province had a preponderant share of the 11 new higher school certificate schools that were established. The boundaries of Rift Valley Province were redrawn to embrace Thompson Falls, but it is likely that the majority of the students were recruited in Nyandarua and other districts of Central Province. Of the other five schools two are in Eastern Province (Meru and Machakos), one in Rift Valley Province (Baringo), one in Western Province, and one in Nyanza Province. It is more serious from the point of view of inequality in the long run that of the six new schools in Central Province five specialise in science. Of the others only that in Nyanza Province specialises in science. Coast and North-Eastern Provinces have not obtained new higher school certificate schools.

Higher education

Although they are very recent, the Harambee colleges of technology are also likely to contribute to inequality by forcing the Government to take over the more successful ones. Further inequality is latent in the fact that Central Province has four planned, Eastern Province two or three, Nyanza Province three, Rift Valley Province one, Western Province two, and Coast and North-Eastern Provinces none.

² A breakdown by province can be found in Ministry of Education: Annual report, 1970.
Finally, although the University discloses no data on student intake by district and ethnic group, the 1971 intake had an obvious preponderance of students from Central Province. This shows clearly that the existing secondary-school system leads to an unbalanced national intake of students: the political implications have been discussed extensively in the national press.
25. THE EXAMINATION AND SELECTION SYSTEM AND THE CERTIFICATE OF PRIMARY EDUCATION

Last week I spent quite some time trying to console my friend Joe over a misfortune that has befallen him. Joe’s misfortune is that he has a son who did his certificate of primary education last year, passed but was not accepted into any high school...

“The trouble with you, Joe, is that you think too much”, I said to Joe. . . . “You are a simple man. Thinking is for more intelligent people. The Ministry says that your son did not pass well enough to go into form 1. Who are you to say otherwise?”

“Who am I? I am Joe.”

“I know you are Joe. But who are you? I mean what do you know about these things? It takes a lot of training and education to weigh one child’s results against those of another and come to the right decision about who shall go into form 1 and who should not. It is not just a matter of looking up the performance list and finding out who came first and who came last. There are certain imponderables . . . .”

“Certain what?” Joe screamed at me.

“Imponderables”, I said.

“What have imponderables to do with whether my child goes into form 1 or not?”

“Everything, Joe. Everything.”

Hilary Ng’weno, in Daily Nation, 27 February 1972.

Most parents in Kenya share Joe’s problem at some time or another. The certificate of primary education determines the whole destiny of a child. If he passes well and enters a government secondary school he has a good chance of ultimately entering a job where his income may reach 10, 20 or even as much as 100 times the national average. But if he fails, his lifetime earnings may not amount to much more than those of someone with no formal education. It is hardly surprising that the examination produces so much anxiety and tension, and the selection process that follows it so much controversy and bitterness.

Pupils sit the examination at the end of their primary education, nominally after seven years at school. The examination is made up of three papers, English, mathematics and general, each marked out of 100. The general paper consists of five sections, history, geography, science, nature study and general knowledge. In 1971 the English paper contained, for the first time, 20 verbal reasoning items of a type commonly used in intelligence tests. The examination had previously consisted entirely of items designed to measure success in learning.

For each question four alternative answers are provided. The candidate indicates his choice by marking the appropriate box on his answer sheet.
Employment, incomes and equality

There are no essay-type questions. It is thus possible for candidates to gain up to 25 per cent on each paper entirely by guessing.

The arrangements for processing the results are highly efficient. Within three weeks the 500,000 answer sheets (three from each of 170,000 candidates) have been passed through a document reader linked to a computer, and results lists for each school prepared. These are then sent to the provincial education officer, together with lists sorted in order of merit by the candidates’ secondary school of first preference.

The procedures followed for selecting secondary-school entrants from these lists vary from province to province. In some provinces selection is left almost entirely to the recruiting headmasters, whereas in others pupils are allocated to schools rather than selected by them. Some provincial education officers release details of the candidates’ performance in all three papers, others show the headmasters only a list in order of over-all merit. The candidates themselves are not told their marks, but they are given an indication of their performance in each paper in terms of letter grades (A to E).

What is the effectiveness of the examination and the associated selection system? It may be useful to consider this from two points of view.

1. What effect has the system on the children leaving the primary schools? In other words, what intellectual characteristics does it identify in the pupils passing through it, and how efficiently does it sort them into appropriate classes?

2. What effect has the system on the primary schools themselves? In other words, what effect has it on the way they function? Does it engender, as well as identify, intellectual characteristics?

For the purposes of analysis, these two principal questions can be divided into a number of subsidiary questions, although, as we shall see, the distinctions are by no means hard and fast.

The system and primary-school leavers

The following questions may be raised in connection with the system and the children who sit the examination.

1. Is the examination an efficient selection device? Does it identify the pupils who will make best use of further formal education? How successful is it in predicting future attainment?

2. Is the system reliable? Does the examination measure efficiently the skills that it sets out to measure?

3. Is the examination suitable as a terminal examination? Does it test skills and knowledge that will be useful and relevant to those who will not continue with formal education? Does it provide them with a capacity for continued informal learning and for effective work within the informal sector?

4. Is the system fair? Does the examination identify with any success pupils of high but underdeveloped potential, resulting from poor teaching or socio-economic handicaps?
The system and the primary schools

The following questions may be raised in connection with the system and its possible influence on the primary schools.

1. What effect have the content and structure of the examination on teaching methods?
2. Does the nature of the examination influence the repeating rate?
3. What effect has the system on the morale of teachers and pupils, and hence on the efficiency of the primary schools?

Gaps in information

It is striking how fragmentary the available information is. We know a great deal about the structure of the educational plant that has been built up in Kenya, but virtually nothing about the nature or value of the product. An industrial organisation run on similar lines would long ago have been submerged by more efficient competition.

In the following pages we shall deal with several of the above points.

The efficiency of the examination as a selection device

So far no study has been completed in Kenya in which a cohort of secondary-school entrants has been followed through to the end of secondary education, a comparison being made between its members' performance in the examination for the certificate of primary education and in that for the East African certificate of education (ordinary level). Two such studies are, however, under way. An investigation in Uganda yielded correlations of 0.374 and 0.428 for boys and girls respectively. The selection examination and the ordinary level examination thus had well under 20 per cent common variance. Moreover, the regression of ordinary level performance on selection examination performance was curvilinear for both sexes; most of the common variance was accounted for by a small group of highly talented pupils who performed well in both examinations. Among average and borderline entrants, the selection examination had virtually no predictive validity. Many of the most successful ordinary-level candidates had been lucky to get into secondary school at all on their selection examination marks, and there seemed to be no reason to suppose that borderline candidates who had been excluded would have been any less successful.

Some preliminary results from six secondary schools in the Rift Valley of Kenya suggest that the correlation between the two examinations may be even lower—perhaps as low as 0.2. Such a correlation—or even one comparable to those found in Uganda—would indicate a serious loss of potential high-level talent.

There are various ways in which much could be done to improve the selection efficiency of the examination for the certificate of primary education, and some of these will be discussed later. There is a limit, however, for human beings have an enormous and often unrecognised capacity for intellectual change and development, so that any prediction based on performance at one
Employment, incomes and equality

point of time is bound to be subject to a wide margin of error. What is needed is to put an end to the certificate’s being the sole arbiter of a child’s educational destiny.

The reliability and fairness of the examination

In an attempt to determine whether the examination increases the skills it is intended to, we shall discuss preliminary results from an item analysis of the 1970 mathematics papers. Analyses of the English and general papers are also under way but they were not yet completed at the time of writing.

The basic purpose of an item analysis is to find out whether each item in a test or examination discriminates between pupils in the way it should. Most tests are designed to measure some relatively homogeneous intellectual characteristic, mathematical ability, for instance, or the understanding of English. In a well designed test, all or most of the items discriminate among the pupils efficiently: the more able pupils answer the item correctly, the less able incorrectly. But in a badly designed test, many of the items discriminate inefficiently, or not at all.

Sometimes an external criterion is available for the skill being measured, but more often the total score on the test itself is used. This is obviously an unsatisfactory criterion if many of the items in the test are inefficient, or if the intellectual skills being assessed are heterogeneous. If there are too many inefficient items, the item analysis can be repeated several times, the weakest items being progressively eliminated until the total score reaches an acceptable validity.

Some examples follow of good and bad items from the 1970 mathematics paper. The data come from a random sample of 332 boys in 12 low-cost rural schools in Nyeri district.

Example 1 (a good, easy item):

My sister is half my age and I am one-third of my father’s age. My father is 48 years old. How old is my sister?

Answer

<table>
<thead>
<tr>
<th>A: 5 1/2 years</th>
<th>B: 8 years</th>
<th>C: 12 years</th>
<th>D: 16 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of candidates giving each answer</td>
<td>19</td>
<td>257</td>
<td>32</td>
</tr>
<tr>
<td>Average marks of these candidates in whole mathematics test</td>
<td>23.8</td>
<td>40.3</td>
<td>27.1</td>
</tr>
</tbody>
</table>

Two hundred and fifty-seven pupils (77 per cent) answered the question correctly. In the whole mathematics test, these pupils averaged 40.3 marks, which is 13 marks (one standard deviation) higher than those gained by pupils giving any other answer. Thus, if we accept the total test mark as a usable criterion of mathematical ability, this item was highly efficient, in that it discriminated sharply between more and less able pupils.
Example 2 (a good, difficult item):

What number increased by 25 per cent becomes 60?

<table>
<thead>
<tr>
<th>Answer</th>
<th>A: 35</th>
<th>B: 75</th>
<th>C: 48</th>
<th>D: 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of candidates giving each answer</td>
<td>71</td>
<td>59</td>
<td>89</td>
<td>107</td>
</tr>
<tr>
<td>Average marks of these candidates in whole mathematics test</td>
<td>29.4</td>
<td>33.8</td>
<td>49.6</td>
<td>32.7</td>
</tr>
</tbody>
</table>

This item was much more difficult: only 27 per cent answered correctly, which is not significantly better than chance. But the distractors (incorrect answers) were well chosen, and must have appeared more plausible to pupils who were guessing than the correct answer. The item thus identified a small but highly able group of pupils.

Example 3 (a bad, difficult item):

Simplify \( \frac{10c^3 + 5c^3}{15c^5} \)

<table>
<thead>
<tr>
<th>Answer</th>
<th>A: ( \frac{2c + 1}{3c^a} )</th>
<th>B: ( \frac{10c}{3} )</th>
<th>C: ( \frac{2c + c^4}{3c^a} )</th>
<th>D: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of candidates giving each answer</td>
<td>66</td>
<td>62</td>
<td>78</td>
<td>122</td>
</tr>
<tr>
<td>Average marks of these candidates in whole mathematics test</td>
<td>40.1</td>
<td>28.8</td>
<td>34.8</td>
<td>40.7</td>
</tr>
</tbody>
</table>

Only 66 pupils (20 per cent) gave the correct answer (A) and on the total test these pupils were less able than those giving answer D. In comparing marks it is necessary, of course, to allow for the marks gained from the item being considered. In this test candidates were credited with two marks for each correct answer, because there were only 50 items in the paper, compared with 100 in each of the English and general papers. In the other 49 items, then, candidates giving answer A averaged in fact only 38.1, compared with 40.7 for those giving answer D.

What seems to have happened is that in many schools in our Nyeri sample, pupils had not been taught how to simplify this type of algebraic expression. The more intelligent pupils from these schools used their native wit, and tried to work out the answer from first principles. Most of these pupils chose D, which is the logical answer if one does not know that different powers of a term cannot be added. Thus the chances of these pupils getting the item right were zero, whereas duller pupils who simply guessed had a 25 per cent chance.

We can test this interpretation by looking at the way boys in high-cost Nairobi schools answered the same item:
Teachers in high-cost schools have had more training and experience and are generally of much higher calibre than teachers in low-cost schools. Those in Nairobi had almost certainly taught their pupils how to handle this kind of problem. Notice that even in high-cost schools the item was a very difficult one, but that the ablest pupils had mastered the tools needed to tackle it, and so answered correctly. Thus the item was an efficient selector.

What of the possibility that the differences in the efficiency of the items are due to rural-urban differences rather than to the quality of the teachers? We can check this by looking at the pattern found among boys in low-cost Nairobi schools.

The patterns are virtually identical with those found in Nyeri. These results suggest an important clue to a possible major reason for the inefficiency of the examination as a predictor of success at the secondary school. If many of its items penalise intelligent children in the same way as that just discussed, then it is highly unlikely that the examination as a whole can be an effective tool in selecting children for secondary education.

Table 106 compares the efficiency of the 50 items of the mathematics paper in question among the pupils of six sub-samples. Efficiency is measured in terms of a rather crude discrimination index:

$$D = \frac{M_R - M_W}{S_D}$$

where $M_R$ is the mean total score of pupils answering the item right, $M_W$ is the mean total score of those answering wrong and $S_D$ is the standard deviation of the total score for the sub-sample.

The items have been classified arbitrarily into three categories of efficiency according to their $D$ indices:

- Good $D = 1$ or $> 1$
- Fair $D = < 1$ but not $< 0.5$
- Poor $D = < 0.5$ or negative.
Several trends are strikingly apparent from this table. In the first place, pupils in high-cost schools perform much better than pupils in low-cost schools. The mean difference is well over one standard deviation. Differences of this order are to be expected from the much better quality of the education high-cost schools provide, although no doubt socio-economic factors also play some part. Secondly, boys perform rather better than girls in all three samples. Thirdly, there are huge differences in the efficiency of the items. In Nairobi high-cost schools about 30 per cent of the items discriminated well between more and less able pupils and only about 15 per cent discriminated poorly. In Nyeri low-cost schools only about half as many items were good selectors, while the number of poor selectors was roughly double. In Nairobi low-cost schools there were virtually no good selectors at all. There is also a clear tendency for the items to be more efficient with boys than with girls.

The difficulty of the items and their efficiency as selectors are necessarily correlated to some extent. It is much easier to construct good easy items than good difficult items. As difficulty increases, the part played by random guessing increases, unless the writer of the test is highly skilled at devising good distractors. But even with the difficulty of the items controlled, the differences in efficiency are still substantial: the items work better in high-cost schools than in low-cost schools, better in Nyeri than in Nairobi low-cost schools, and better among boys than among girls.

Most of the items that worked well in low-cost schools did not need highly specialised knowledge for their solution. Some of them required only basic arithmetical operations (averages, areas, volumes); others could be worked out from first principles (reasoning problems); still others drew on skills to which out-of-school experiences contributed substantially (money problems). Most of the inefficient items, on the other hand, required specialised knowledge.

These trends point strongly to an interpretation that has already been hinted at: a major reason for the inefficiency of the examination in low-cost schools may be that many items test the teachers rather than the pupils. No matter how intelligent a pupil may be, he will be unable to work through a mathematical problem successfully unless he has been introduced to the necessary knowledge and techniques. Indeed, where the problems are of the multiple-choice type, the intelligent pupil may even be penalised; he may be
attracted towards plausible distractors, and may thus have a poorer chance of answering correctly than less able pupils who simply guess.

The inefficiency of many items in the mathematics paper, then, may be due to deficiencies in the knowledge or skills of the teachers. To check this hypothesis further, we examined the variations in the difficulty of the items among the 12 schools in our Nyeri (low-cost) sample. Again, the results are too complex to present in detail, but the trends are clear.

Among the 12 schools there were quite strongly defined differences in over-all performance. The best school averaged 41.42 marks, and the poorest 26.90, or about one standard deviation lower. But these over-all differences were by no means consistently reflected in the individual items. As many as eight schools did better than all other schools on at least one item, and of these, seven performed less well than any other school on at least one other item. The ten most difficult items were excluded from the analysis, so chance variations are not a major reason for the differences.

This type of analysis must not be pushed too far, because the percentages are based on rather small groups (their numbers range from 23 to 70) and are hence somewhat unstable. The general conclusion to be derived from the analysis, however, is quite clear: the quality of mathematics teaching received by pupils in low-cost Nyeri schools is extremely variable, not only between teacher and teacher but also between topic and topic. No teacher seems to have managed to cover the entire syllabus adequately; all have concentrated to some extent on certain topics and ignored others. This patchiness is most apparent in parts of the syllabus requiring specialised knowledge, which suggests that some, at least, of the teachers have not mastered all the material themselves. Under these circumstances, it is hardly surprising that so many of the items differentiate so poorly between the abler and less able pupils.

The suitability of the examination as a terminal examination

In the past there has been a great deal of discussion on the apparent incompatibility of the two functions of the examination for the certificate of primary education: selecting pupils for secondary education and providing a leaving certificate for children who do not pursue their formal education beyond the primary stage. It has even been suggested that there should be two separate examinations. Our data, however, tend to show that this incompatibility is largely illusory. If the mathematics paper were confined to questions testing basic computational skills, numerical reasoning ability, and competence in solving practical mathematical problems, it would not only be a much more useful terminal examination than it is at present but it would also, in all probability, be a more efficient instrument of selection. The practical part of the paper could include shopkeeping problems, simple farming and business accounts, the calculation of crop yields, and a wide range of other problems likely to be met with by the school leaver engaged in agriculture or self-employment. It could also include problems encountered in self-help community development projects, such as the contributions needed from each household of an area for building a cattle dip or the length of piping required for a water project.

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Most questions in all sections require the candidate to reproduce remembered facts. The few that try to tap his understanding of causes and reasons are sometimes ambiguous or debatable.

It is doubtful whether teachers in low-cost primary schools are any better equipped to prepare their pupils for the general paper than they are for the mathematics paper. Here again it seems very likely that drastic revision could make the paper not only a more efficient selection tool but also a more useful examination for school leavers. Like the mathematics paper, the general paper would be improved by a heavy reduction in the number of items testing knowledge of technical terms and specific facts, and a corresponding increase in items testing relevant and practical knowledge and the ability to understand relations of cause and effect. There should be at least as many items asking how or why as there are items asking what, when or who.

While it is certainly not feasible or desirable to teach general agriculture as a full subject in primary schools, there seems to be no reason why the science and nature study sections of the general paper should not include a substantial number of items on such topics as the causes and treatment of coffee berry disease, the use of fertilisers, soil erosion, and the effects of tick-borne diseases on cattle. Topics such as these are the concern of every progressive farmer in Kenya, whether educated or uneducated. They are well within the comprehension of upper-primary-school pupils.

When a pupil leaves primary school after the examination, he needs above all to have a firm grasp of the basic intellectual skills. He should be able to read with understanding and write with clarity. He should be able to carry out straightforward mathematical calculations accurately. And he should have developed the ability to reason clearly, both in numerical and verbal contexts. Besides these basic skills, he should have a substantial body of relevant factual knowledge. This knowledge should not be confined entirely to facts about his immediate environment; he also needs to know something about the wider world. The general paper certainly cannot be criticised on the grounds that it fails to test facts. But it is impossible to avoid the impression that a great deal of the factual material is intellectual bric-a-brac—attractive enough for display on occasion as evidence of educational status, but otherwise not much to the purpose.

Pupils repeating their year

Repeating has not been discussed under any of the previous headings. No analysis of repeaters could be carried out on the basis of the 1970 sample, because reliable data were not available. In 1971, however, it was possible to collect information on repeating from all candidates for the certificate of primary education in a location in Nyeri district. The data, like those of the previous year, are still incomplete except in mathematics. The 1971 mathematics paper was somewhat easier than the 1970 paper, but the range of topics covered and the style of the questions were similar.

Table 107 shows the numbers of pupils who were repeating and not repeating standard 7, broken down according to whether they had or had not repeated classes between standards 1 and 6. It will be seen that 76 out of 269 pupils, or 28 per cent, are repeaters of standard 7.
Employment, incomes and equality

Table 107. Number of pupils repeating in standard 7 as compared with the number who repeated in lower standards, class in Nyeri district, 1971

<table>
<thead>
<tr>
<th>Pupils in standard 7</th>
<th>Total number</th>
<th>Never repeated in standards 1 to 6</th>
<th>Repeated in standards 1 to 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>Repeating</td>
<td>76</td>
<td>45</td>
<td>59</td>
</tr>
<tr>
<td>Not repeating</td>
<td>193</td>
<td>101</td>
<td>52</td>
</tr>
</tbody>
</table>

Table 108. Mean marks, broken down according to whether they repeated in lower standards, of pupils repeating and pupils not repeating standard 7, in the mathematics paper of the examination for the certificate of primary education, class in Nyeri district, 1971

<table>
<thead>
<tr>
<th>Pupils in standard 7</th>
<th>Total</th>
<th>Never repeated in standards 1 to 6</th>
<th>Repeated in standards 1 to 6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>Repeating</td>
<td>58.0</td>
<td>60.9</td>
<td>56.5</td>
</tr>
<tr>
<td>Not repeating</td>
<td>41.4</td>
<td>45.4</td>
<td>37.6</td>
</tr>
<tr>
<td>All</td>
<td>46.1</td>
<td>50.0</td>
<td>43.1</td>
</tr>
</tbody>
</table>

If we include pupils who have repeated between standards 1 and 6 the rate is of course much higher. Only 101 pupils, or 37.5 per cent of the total, have reached standard 7 without repeating any class. If 50 per cent of these repeat in 1972, the final figure will be only about 19 per cent.

Another point to notice from this table is that the propensity to repeat standard 7 is quite uncorrelated with the propensity to repeat lower classes. In fact, if anything the trend is in the reverse direction; repeaters of standard 7 tend to be pupils who have passed through the lower classes without repeating. This suggests that there must be different reasons for repeating, affecting different pupils at different levels.

The data of table 108 point to the major reason why repeating is such a problem in Kenya; there is an enormous advantage in it. Pupils sitting for the certificate of primary education for the first time average nearly one standard deviation lower than those repeating. The 1971 repeaters did not, of course, include any of the ablest non-repeaters from the 1970 cohort, because all of these went off to secondary schools. But it is also unlikely that many of the weakest pupils from the 1970 cohort are in the 1971 repeater group, because they were probably not allowed to repeat. On balance, the two trends may roughly cancel each other out, so the difference in total mean score may be a fair indication of the benefit to be gained by sitting the examination a second time.

When we come to look at the effects of repeating in lower classes, however, the results are in sharp contrast. The more often a pupil has repeated between standards 1 and 6, the lower his mark in mathematics is likely to be. This is true regardless of whether or not he has repeated standard 7. Pupils who have repeated lower classes twice or more score about one standard deviation lower
than those who have not repeated. The most successful pupils of all are those who came straight through the lower standards and then repeated standard 7.

It thus seems clear that there are two quite different patterns of repeating. In the lower forms pupils who repeat are the slow learners, those who find it difficult to keep up with the others in their class. But in standard 7 the repeaters are the abler pupils, who find the hurdle of the certificate too high to clear at the first attempt. Judging from the mean total scores it seems unlikely that many first-attempters were successful in gaining secondary-school places, although data are not yet available. Hence it is true only in a restricted sense that in standard 7 repeaters are failures. They failed to enter secondary school at their first attempt, of course, and this is important. But judged from the experience of previous cohorts, this was hardly to be avoided. They are the pupils who nearly succeeded, not the pupils who failed.

These results suggested that it might be possible to identify certain types of item that gave a bigger advantage to repeaters than other types. It seemed likely, for instance, that repeaters might tend to do better in items requiring specialised or technical knowledge, whereas first-attempters might be more successful in items tapping reasoning ability. If this was so, it might be possible to reduce the advantage of repeating by raising the proportion of items favouring non-repeaters. This might do something towards reducing the seriousness of the problem.

It was found, however, that in the mathematics paper at least there were no discernible variations. Repeaters tended to do better than non-repeaters on problems of all types: practical, day-to-day problems as well as theoretical problems in algebra and geometry, problems tapping reasoning ability as well as problems measuring achievement.

There is only one possible explanation for these results. For many pupils, the benefits of repeating must derive from the opportunity for an extra year's intellectual development rather than from the extra period of cramming for the examination. Our stereotype of the repeater as the average pupil in the back row, looking rather bewildered, painfully trying to amass enough facts to scrape through the examination into secondary school, is no longer generally valid, at least in educationally advanced areas such as Nyeri. Instead, he is just as likely to be an intelligent or even highly intelligent pupil of 14 or 15 who failed to gain entrance to secondary school at his first attempt because he was competing with pupils who had had the advantage of at least one more year's intellectual growth. It would clearly be inefficient as well as inequitable to deny him a place in a secondary school.

The problem derives largely from the steadily declining age at which pupils now present themselves to be selected for entry to a secondary school. Less than ten years ago, the typical candidate was 16 or 17 years old. By this age, intellectual growth as measured by tests of reasoning ability (though not by test of attainment) is nearing completion. By most tests, reasoning ability reaches a plateau at about 18 years, and may thereafter even start to decline slightly. Until quite recently, then, it was certainly true that the typical repeater improved his mark mainly by endless memorising and recapitulation. Now, however, the situation is different. Many candidates sit the examination for the first time when they are only 14 years old, and some when they are only 12 or 13. At these ages growth in reasoning ability is still extremely rapid. Any
reasoning test score for a person 15 years of age or younger is virtually meaningless as a measure of ability unless it is related to chronological age, expressed in years and months.

Our results should not have been as unexpected as they were. In parts of the United Kingdom where secondary-school selection is practised, the age at which pupils sit the examination is strictly controlled. Only those born within a specified 12-month period may sit in any given year. Even so, it has been found that there are small but consistent increases in performance with each month’s increase in age, the over-all effect of which is to give a clear advantage to the older pupils inside this narrow range. In Kenya, where the age range is four or five times as large, the effects must be much greater.

It is obvious that there is no short-term solution to this problem. Given the existing age disparity among pupils entering standard 7, any attempt to prohibit repeating would be both inefficient and inequitable, even if it were feasible. In time it will be possible to insist that every primary-school entrant produce a birth certificate, so that an accurate record of his age can be made. If places were available, pupils might still be permitted to repeat, but a correction for age could be made to their total score before secondary-school entrants were selected. The current campaign for the registration of births would receive a big impetus if the Government were to announce that in, say, seven years’ time the date of birth would have to be proved before pupils could enrol in a primary school.

The most effective way of mitigating the unfortunate consequences of the present system of selection would be to remove its once-for-all quality. It has already been suggested in the main report that this might be achieved by converting Harambee schools into two-year “second chance” schools, with an opportunity for the ablest pupils to re-enter government-maintained education at the form 3 level through the Kenya junior secondary examination. The principle is one that should be applied throughout the whole system of formal education. At every point where selection occurs, there should always be at least one institutionalised channel through which school leavers who have demonstrated their competence in some other activity (employment, training or informal education, for example) can re-enter the formal system if they wish.
There have been two tripartite agreements in Kenya, so called because they are agreements between the Kenyan Government, the employers' federation and the trade unions. The contents of the two agreements, one reached in 1964 and one in 1970, are very similar. Both were recognised as short-term measures adopted to allow time for long-term measures to take effect. The aim of the 1964 Agreement was "to alleviate the hardship being experienced by the unemployed and to provide the new Government with a breathing space in which to get its plans for economic development under way". \(^1\) According to the preamble, the parties to the 1970 Agreement, "recognising the present need to take emergency measures to alleviate unemployment, acknowledge that these measures are short-term and accept that the ultimate solution lies in the implementation of long-term plans to expand the economy". They add that "sacrifices must be made at this juncture in order to grant time to implement effectively long-term plans, already envisaged in the Development Plans, for the growth of the economy".

This paper is primarily concerned with the 1970 Agreement and its consequences. A comparison with 1964 is made at the end.

**THE 1970 AGREEMENT**

The 1970 Agreement was signed on 18 June. It covered the period from 1 July 1970 to 1 July 1971.

It had three main elements:

1. The Government and the employers agreed to expand their employment by 10 per cent of their regular establishment on 31 May 1970. The Agreement was interpreted as allowing the increase to include the filling of positions that became vacant through natural wastage. The additional employment was to be provided by the end of September, but this was later extended to the end of November.

2. Employees agreed to a 12-month wage standstill.

\(^1\) Ministry of Labour and Social Services, Manpower Branch: *Report on the Tripartite Agreement on Measures for the Immediate Relief of Unemployment*, p. 94.
3. There were to be no strikes or lockouts during the period of the Agreement.

Three secondary provisions are of interest. First, paragraph 9 states that "additional employment will, as far as possible, take place in the rural areas". Secondly, employers were given the option, in special cases, of making a financial contribution to national projects instead of expanding employment. Thirdly, under paragraph 11(a), the Government undertook to "introduce and implement a Wages and Incomes Policy to become operative on a date not later than the expiry of this Agreement".

A Standing Tripartite Committee was set up to study the situation and make recommendations from time to time regarding employment and unemployment with a view to an orderly return to normal relations at the end of the one-year period.

THE OPERATION OF THE AGREEMENT

The registration of those seeking employment under the Agreement took place largely through existing employment exchanges, though extra centres were also opened up. Registration was heavy and it was decided to call off further registration after four days, though in some places the books appear to have stayed open longer. Registration was stopped partly because it was believed that people might register twice and that some people who already had jobs were registering in order to get better jobs, and partly because the numbers registered far exceeded the additional employment possible. Altogether 290,911 people registered, or 46.4 per cent of total numbers employed in the modern sector in 1969. This figure cannot be taken as a measure of unemployment, because it is certain that people with jobs of one kind or another did register. One firm we saw in Thika said that a number of its workers went to Nairobi to register. On the other hand, the massive response gives a clear indication, if one is needed, of the enormous potential demand for modern-sector employment.

Table 109 shows numbers registered by province, with employment and population figures for comparison. Table 110, based on the same data, compares not only numbers registered with employment and population but also employment with population. There were considerable variations in the ratio of registrations to numbers employed. Nairobi had the lowest ratio, where registrations formed slightly less than a third of numbers employed; in North-Eastern Province registrations were more than one-and-a-half times as many as numbers employed. Registrations were most numerous in relation to numbers employed where the latter formed a relatively small part of the total population of working age. In both Western and North-Eastern Provinces modern-sector employment covered a very small proportion of the population of working age (3.3 per cent and 2.1 per cent respectively), and these were the only provinces in which registrations exceeded the total numbers employed. Table 111 shows how closely the order of provinces arranged by registrations as a percentage of numbers employed reverses that of provinces arranged by numbers employed as a percentage of working population. Indeed, as can be seen from the second column of table 110, the variation between provinces

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Table 109. Registrations under the 1970 Tripartite Agreement, number of persons employed in the modern sector and population of working age, December 1970

<table>
<thead>
<tr>
<th>Province</th>
<th>Registrations</th>
<th>Numbers employed in the modern sector 1969</th>
<th>Population of working age (15–60), 1969</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Registrations</td>
<td>Numbers employed in the modern sector 1969</td>
<td>Population of working age (15–60), 1969</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1969</td>
<td>1969</td>
</tr>
<tr>
<td>Nairobi</td>
<td>52 000</td>
<td>163 615</td>
<td>299 674</td>
</tr>
<tr>
<td>Central</td>
<td>40 442</td>
<td>93 800</td>
<td>702 198</td>
</tr>
<tr>
<td>Nyanza</td>
<td>39 516</td>
<td>45 722</td>
<td>962 480</td>
</tr>
<tr>
<td>Western</td>
<td>26 775</td>
<td>18 761</td>
<td>561 647</td>
</tr>
<tr>
<td>Coast</td>
<td>40 504</td>
<td>84 526</td>
<td>508 131</td>
</tr>
<tr>
<td>Rift</td>
<td>59 641</td>
<td>178 949</td>
<td>1 048 941</td>
</tr>
<tr>
<td>Eastern</td>
<td>27 914</td>
<td>39 219</td>
<td>855 198</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>4 119</td>
<td>2 622</td>
<td>123 498</td>
</tr>
<tr>
<td>Total</td>
<td>290 911</td>
<td>627 214</td>
<td>5 061 767</td>
</tr>
</tbody>
</table>

Sources: 1 Ministry of Labour. 2 Annual enumeration of employees, 1968–70. 3 Population census, 1969.

Table 110. Proportions of registrations under the 1970 Tripartite Agreement, number of persons employed in the modern sector and population of working age, December 1970

<table>
<thead>
<tr>
<th>Province</th>
<th>Registrations as a percentage of 1969 numbers employed in the modern sector</th>
<th>Registrations as a percentage of population of working age</th>
<th>Employment as a percentage of population of working age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi</td>
<td>31.8</td>
<td>17.4</td>
<td>54.6</td>
</tr>
<tr>
<td>Central</td>
<td>43.1</td>
<td>5.8</td>
<td>13.4</td>
</tr>
<tr>
<td>Nyanza</td>
<td>86.4</td>
<td>4.1</td>
<td>4.8</td>
</tr>
<tr>
<td>Western</td>
<td>142.7</td>
<td>4.8</td>
<td>3.3</td>
</tr>
<tr>
<td>Coast</td>
<td>47.9</td>
<td>8.0</td>
<td>16.6</td>
</tr>
<tr>
<td>Rift</td>
<td>33.3</td>
<td>4.9</td>
<td>17.1</td>
</tr>
<tr>
<td>Eastern</td>
<td>71.2</td>
<td>3.3</td>
<td>4.6</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>157.1</td>
<td>3.3</td>
<td>2.1</td>
</tr>
<tr>
<td>All provinces</td>
<td>46.4</td>
<td>5.8</td>
<td>12.4</td>
</tr>
</tbody>
</table>

Source: based on table 109.

is not very great, provided that Nairobi and Coast Province are left out, when registrations are considered in relation to total population of working age. There does, however, appear to be some positive correlation between registrations in relation to working population and the proportion of the working population employed in the modern sector. This is shown where the modern sector is particularly important, for in Nairobi and Coast Province registrations were the highest in relation to total working population. It is also shown where the modern sector forms a particularly small proportion of the total, for in North-Eastern, Eastern and Western Provinces registrations were relatively low in relation to working population. It appears that the urban areas attracted a disproportionate share of registrations, reflecting the belief that good jobs were more likely to be found in the larger towns.
Employment, incomes and equality

Table 111. Order of provinces arranged by registrations under the 1970 Tripartite Agreement as a percentage of numbers employed and by numbers employed as a percentage of working population, December 1970

<table>
<thead>
<tr>
<th>Province</th>
<th>Registrations as a percentage of numbers employed in the modern sector (lowest = 1)</th>
<th>Numbers employed in the modern sector as a percentage of working population (highest = 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Central</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Nyanza</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Western</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Coast</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Rift</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Eastern</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: based on table 110.

Placements under the Agreement

Altogether 45,680 jobs were provided under the scheme, 30,203 by the private sector and 15,477 by the public sector. The extra jobs provided by the public sector thus reached 6.5 per cent of the number employed in 1969 and those provided by the private sector 7.8 per cent of the number employed in 1969. The percentage for public and private sectors combined was 7.3. This falls short of the target of 10 per cent but, as domestic servants and certain other workers were excluded from the target, and, subject to the discretion of the Minister of Labour, certain employers "in cases of proven hardship" and, again subject to Ministry approval, employers who chose to make a financial contribution in lieu of providing employment were exempted from participating, the total number placed went a good way towards meeting the initial target.

In the event, the Ministry of Labour interpreted "hardship" very strictly and only sisal firms and charities were exempt. Few firms opted for the financial contribution, which had raised a total of some £12,000 by August 1971. Assuming that the contribution was assessed as 10 per cent of the payroll, with an average monthly wage of £12.10 sh., the financial contribution amounted to only 78 workers’ annual wages. This indicates that employers preferred to pay and employ rather than simply to pay, which suggests that few employers expected a negative product from the extra workers and most expected some positive contribution to outweigh the extra administrative costs associated with extra employment. Only regular workers were covered by the Agreement and these were defined as employees who had been in employment for more than one year, excluding casual and seasonal workers. Although casual and seasonal workers are normally excluded from employment figures for the modern sector, employees of less than one year’s standing are included: hence the percentage of jobs provided may have approximated to 10 per cent of regular employees as defined.
## Labour Market Policies

### Table 112. Placements under the 1970 Tripartite Agreement, December 1970

<table>
<thead>
<tr>
<th>Province</th>
<th>Private sector</th>
<th>Government</th>
<th>Private sector and Government</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nairobi</td>
<td>8 146</td>
<td>— 1</td>
<td>— 1</td>
</tr>
<tr>
<td>Central</td>
<td>6 053</td>
<td>555 2</td>
<td>6 608 3</td>
</tr>
<tr>
<td>Nyanza</td>
<td>1 162</td>
<td>1 142</td>
<td>2 304</td>
</tr>
<tr>
<td>Western</td>
<td>883</td>
<td>102</td>
<td>985</td>
</tr>
<tr>
<td>Coast</td>
<td>4 262</td>
<td>159</td>
<td>4 421</td>
</tr>
<tr>
<td>Rift</td>
<td>8 624</td>
<td>1 055</td>
<td>9 679</td>
</tr>
<tr>
<td>Eastern</td>
<td>957</td>
<td>— 1</td>
<td>— 1</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>116</td>
<td>0</td>
<td>116</td>
</tr>
<tr>
<td>All provinces</td>
<td>30 203</td>
<td>15 477</td>
<td>45 680</td>
</tr>
</tbody>
</table>

1 It is impossible to disentangle the government figures for Nairobi and Eastern Province. The Nairobi office area (which includes Machakos, Kitui, Kiambu and Magadi) provided 11,993 jobs. 2 The figures exclude government employment in Kiambu, which is included in the Nairobi office area.

Source: Ministry of Labour.

### Table 113. Placements under the 1970 Tripartite Agreement, December 1970: ratios

<table>
<thead>
<tr>
<th>Province</th>
<th>Private sector placements as percentage of registrations</th>
<th>Private sector and government placements as percentage of registrations</th>
<th>Private sector placements as percentage of numbers employed</th>
<th>Private sector and government placements as percentage of numbers employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi</td>
<td>15.7</td>
<td>(26.8) 1</td>
<td>5.0</td>
<td>(10.7) 1</td>
</tr>
<tr>
<td>Central</td>
<td>15.0</td>
<td>16.3 2</td>
<td>6.5</td>
<td>7.0 2</td>
</tr>
<tr>
<td>Nyanza</td>
<td>2.9</td>
<td>5.8</td>
<td>2.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Western</td>
<td>3.3</td>
<td>3.7</td>
<td>4.7</td>
<td>5.3</td>
</tr>
<tr>
<td>Coast</td>
<td>10.5</td>
<td>10.9</td>
<td>5.0</td>
<td>5.2</td>
</tr>
<tr>
<td>Rift</td>
<td>14.5</td>
<td>16.2</td>
<td>4.8</td>
<td>5.4</td>
</tr>
<tr>
<td>Eastern</td>
<td>3.6</td>
<td>(26.8) 1</td>
<td>2.6</td>
<td>(10.7) 1</td>
</tr>
<tr>
<td>North-Eastern</td>
<td>2.8</td>
<td>2.8</td>
<td>4.4</td>
<td>4.4</td>
</tr>
<tr>
<td>All provinces</td>
<td>10.4</td>
<td>15.7</td>
<td>4.8</td>
<td>7.3</td>
</tr>
</tbody>
</table>

1 Figure for Nairobi and Eastern Province together, with Kiambu as well in government placements. 2 Excludes Kiambu in government placements.

Source: Based on tables 109 and 112.

Tables 112 and 113 give more detailed information on placements by province. Government data are not provided for each province separately, which makes interpretation difficult.

Placements were in general only a fraction of registrations—less than a fifth everywhere except in Nairobi and Eastern Province. In all, 16 per cent of those registered got jobs. This low ratio is significant from the point of view of assessing the effect of the Agreement on aspirations: it clearly raised more hopes than it fulfilled. In general, except in Eastern and North-Eastern
Employment, incomes and equality

Provinces, the private sector jobs were distributed where opportunities arose, about 5 per cent of new jobs being created by the private sector. It appears that jobs provided by the Government were more concentrated, particularly in Nairobi, though it is impossible in the data to separate Nairobi from parts of Eastern Province.

One of the provisions of the Agreement required that jobs should be created whenever possible in the rural areas.

The information available on registrations and placements relates to a total of eight towns (Nairobi, Mombasa, Nakuru, Thika, Eldoret, Nanyuki, Kitale and Nyeri). Those eight account between them for 8 per cent of the country’s population; yet they account for 41.7 per cent of the number of persons employed in the modern sector, 45.7 per cent of the registrations under the 1970 Agreement, 61.2 per cent of placements in the private sector under that Agreement and 70.9 per cent of the corresponding placements in the government sector.\(^1\) It will be seen that the Agreement in no way righted the balance between the towns listed and the rest of Kenya. The towns were more heavily represented in the registrations than in total numbers employed in the modern sector. Private-sector placements were considerably more concentrated in the towns than numbers already employed. Government placements were even more heavily concentrated.

THE NORMAL EXPANSION OF EMPLOYMENT

Jobs provided under the Agreement were not necessarily a net addition to the employment that would otherwise have been provided. In the first place some expansion in employment would have taken place in response to the expansion in the economy. Table 114 shows the recent behaviour of employment in the modern sector.

The 7.8 per cent increase in employment provided under the Agreement in the private sector was considerably higher than the rate of the preceding years, but the increase of 6.5 per cent in the public sector indicated a much less impressive change. The combined percentage of 7.3 was substantially larger than the normal annual increase in total numbers employed, which had averaged 1.1 per cent per year between 1964 and 1970.

There are two reasons why employment provided under the Agreement did not necessarily represent a net increase. First, a certain number of vacancies occur naturally during the year, through causes such as labour turnover and wastage. Figures from the mission survey of labour turnover suggest that the average annual rate of turnover in the private sector outside agriculture is nearly 15 per cent and that it is much higher in agriculture. Data from some of the largest non-agricultural firms suggest lower annual turnover rates of 5 to 6 per cent, but it is clear that in an average non-agricultural firm nearly 15 per cent of regular jobs are likely to become vacant during the year and that the rate is much higher in agriculture. Thus, without any expansion in employment

\(^1\) See notes to tables 112 and 113. The percentage given here is based on the assumption that government placements were distributed between Nairobi and Eastern Province in the same ratio as private-sector placements. If they were all in fact carried out in Nairobi the percentage would be 85.
Labour market policies

Table 114. Employment in the modern sector, 1965–70

<table>
<thead>
<tr>
<th>Year</th>
<th>Private sector (thousands)</th>
<th>Public sector (thousands)</th>
<th>Total (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>393.8</td>
<td>188.2</td>
<td>582.1</td>
</tr>
<tr>
<td>1966</td>
<td>385.0</td>
<td>200.4</td>
<td>585.4</td>
</tr>
<tr>
<td>1967</td>
<td>385.4</td>
<td>212.1</td>
<td>597.5</td>
</tr>
<tr>
<td>1968</td>
<td>384.5</td>
<td>221.9</td>
<td>606.4</td>
</tr>
<tr>
<td>1969</td>
<td>389.6</td>
<td>237.6</td>
<td>627.2</td>
</tr>
<tr>
<td>1970</td>
<td>396.4</td>
<td>248.0</td>
<td>644.4</td>
</tr>
</tbody>
</table>

Percentage change in relation to preceding year

<table>
<thead>
<tr>
<th>Year</th>
<th>Private sector (%)</th>
<th>Public sector (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966</td>
<td>-2.2</td>
<td>+6.3</td>
<td>+0.6</td>
</tr>
<tr>
<td>1967</td>
<td>+0.1</td>
<td>+5.8</td>
<td>+2.1</td>
</tr>
<tr>
<td>1968</td>
<td>-0.1</td>
<td>+4.6</td>
<td>+1.5</td>
</tr>
<tr>
<td>1969</td>
<td>+1.4</td>
<td>+7.1</td>
<td>+3.4</td>
</tr>
<tr>
<td>1970</td>
<td>+1.7</td>
<td>+4.3</td>
<td>+2.7</td>
</tr>
</tbody>
</table>


15 per cent of the jobs in a typical firm might be expected to become vacant every year, and in less than one year the 10 per cent required by the Agreement would be absorbed by the filling of the normal vacancies. Several of the firms we interviewed said that, though initially they had little for their extra employees to do, the latter had by now (nearly two years after the beginning of the Agreement) been absorbed through the normal process of wastage.

The exclusion of all casual employees and children from the Tripartite Agreement enabled employers who normally relied on such labour to substitute regular employees, and we found evidence of their doing so in certain cases. Nevertheless, there was no fall in the figures for casual employees in 1970, as can be seen from table 115.

On the other hand, according to the Ministry of Labour, “there was a considerable drop in the employment of young persons and children owing to the abundant adult labour generated by the registration under the Tripartite Agreement”. It was feared at the time that the Tripartite Agreement might be negated by mass sackings either during its term of validity or immediately after. In fact mass sackings during the term of validity were excluded by the Agreement itself. The investigation of sackings both during and after the term of validity suggested that these were much exaggerated in the press.

After the Agreement ended the Federation of Kenya Employers sent out a mass appeal to its members to keep employees who had been hired under the Agreement. The Government also issued instructions that its employees should be retained. In our discussions with firms we came across one that had managed to sack its additional employees after only six months (on the pretext of a strike), but this was an isolated example and all the others questioned said that they had retained their additional employees. The secretary of the Fed-

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1 Annual report, 1970, para. 5.
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Table 115. Casual employment, 1968–71

<table>
<thead>
<tr>
<th>Year</th>
<th>Numbers employed in the modern sector</th>
<th>Numbers employed by the Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968</td>
<td>98,779</td>
<td>n.a.</td>
</tr>
<tr>
<td>1969</td>
<td>95,966</td>
<td>19,468</td>
</tr>
<tr>
<td>1970</td>
<td>97,251</td>
<td>21,288</td>
</tr>
<tr>
<td>1971</td>
<td>n.a.</td>
<td>27,519</td>
</tr>
</tbody>
</table>

n.a. = not available.

Source: Ministry of Finance and Planning, Statistics Division.

oration of Kenya Employers has claimed that 90 per cent of the people taken on under the Agreement are still in employment.

Most of the workers registered and employed under the Agreement appear to have been without formal skills. However, nearly one-fifth of the total placed were school leavers, three-quarters of whom found jobs during the year.

TYPES OF EMPLOYMENT

Private sector

There was a sharp division among the firms we saw between those that were expanding anyway and for whom the Agreement therefore represented pure gain, in terms of the wage freeze, and those that were required to take on additional employees they did not require. The latter could be classified into positive, zero and negative marginal product firms.

(1) Positive marginal product of labour: we found no unambiguous example of this. No firm (of our small sample) said that its output had gone up as a result of the extra employees. Two offices got nearest to this. In both, additional messengers and cleaners had been employed, and were kept on because the offices were now accustomed to their services. Presumably output has gone up—defined in terms of number and speed of messages delivered and general cleanliness. It is interesting that these are cases where output is peculiarly difficult to measure.

(2) Zero marginal product: this seems to have been the most common experience. The additional employees were provided with some sort of job, and were ultimately absorbed into the productive labour force through natural wastage. Strictly, one should distinguish cases where marginal product was positive but less than the wage, from cases of zero marginal product. It seems likely that employers who complained that there was no need for the additional employees meant that the work the latter did failed to justify their wage, rather than that they contributed nothing and simply caused work sharing.

(3) Negative marginal product: one firm claimed that the administrative and supervisory efforts involved had a sizable negative effect on output. This of course is quite possible but it seems odd that the firm did not prefer to
make a financial contribution, and thus avoid the cost of reduced output. Another firm claimed that very large numbers of extra clerical staff were required to administer the Agreement. Again the net effect may have been negative.

It was clear that none of the firms we talked to had made any major change in method of production, organisation or capital-intensiveness of technique in order to accommodate itself to the Agreement. This was partly due to the short-term nature of the Agreement and the fact that any extra labour would be absorbed by natural wastage within about two years anyway. New capital equipment is normally expected to be in use for at least ten years. Hence a one-year agreement to expand employment is unlikely to affect decisions concerning capital equipment, particularly since the delay in installing a machine is so great that any decision taken while such an agreement was in force was likely to be realised in actual equipment only after its expiration. Similarly, major organisational changes are likely to look further ahead than the next year. It is more likely that a one-year agreement of the kind in question might delay decisions to install new labour-saving equipment or introduce labour-saving organisational changes. Although we found no example of this, a delay would be a rational reaction to the obligations imposed by the Agreement. But in terms of capital expenditure and labour productivity, the effect of a delay instead of a major change in structure would also be of short duration. The very rapid rise in investment in 1970 compared with 1969 does not support a delay hypothesis. Another reason why the nature of investment is unlikely to be much affected is that on the whole firms that are investing heavily are expanding, so that they find the additional employees no burden. But the most important reason why little major change was effected arose from the short-lived nature of the Agreement.

The initial plan of the Ministry of Labour was for a three-year agreement with employment expanding by 10 per cent, 5 per cent and 5 per cent over the three years (and wages increasing by zero, 1 per cent and 1 per cent). Such an agreement would have forced employers to make more substantial changes. However, it was opposed by both employers, who disliked the employment provisions, and trade unions, who disliked the wage provisions. It is clear, though, that if extra employment, with a change in the nature of investment and production decisions, is to be brought about by administrative fiat, the period covered must be long. An agreement that required all employers to expand employment by some fixed percentage each year over a long period—say ten years—and required the new employment to be a net addition to existing employment (and hence not to be offset by natural turnover) might force employers to change the nature of their investment decisions. Such an agreement, because of its long-term nature, might have implications for efficiency, savings and investment outweighing any advantages, even in terms of employment, that it engendered. Unless it was offset by continued restraint on real wages it would involve increased wages and consumption, reduced savings (compared with a no-agreement situation) and probably, in the long run, adverse effects on employment. Thus it could be introduced only if it were combined with wage restraint. Unions might find that the additional employment offset the disadvantages of wage restraint. The commitment to increased employment would also affect efficiency and profitability and might reduce
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investment for this reason too. The benefits in terms of employment could outweigh such costs—but an agreement of this nature could be successful only in the context of firm government action on wages and investment.

Whether or not a long-term agreement is considered desirable or workable, the point that emerges clearly from the experience of the Tripartite Agreement is that a short-term agreement of this nature does not affect the long-term decisions that determine long-term employment. Its effects are only transitory. For long-term change a long-term agreement is necessary. A short-term agreement may even be counter-productive. The fact that Kenya has already had two tripartite agreements may suggest to employers that these are likely to be a regular feature of Kenyan government policy—not an unreasonable expectation against the background of a worsening employment situation. But since the agreements impose obligations in relation to the numbers employed, they amount in effect to a periodic tax on labour, of about 2 per cent of the annual wage bill on current performance for firms that are not expanding their labour force anyway. Hence in terms of long-run decisions, they amount to an additional inducement to install more rather than less labour-saving machinery. However, as a tax, it is partly offset by the periodic wage freeze that accompanies it, so that the net effect on wage costs may be nearer to 1 per cent per annum.

Government

The government sector included statutory boards, municipalities and county councils. The Government was therefore able to take advantage of natural expansion in one sector to offset its over-all obligations. In this respect it was at an advantage compared with the private sector, whose obligation extended to each individual firm. In 1964 the local authorities were prevented from fulfilling their obligations by lack of finance. In 1970 they were promised supplementary funds and were thus able to fulfil more of their obligations. The Government made a serious effort to take people on where they were needed: lists of vacancies and employment plans were drawn up. The time allowed was extended to allow orderly absorption. As in the private sector, it seems unlikely that any major changes resulted: vacancies that would be filled in any case were filled earlier than they would normally have been.

WAGES

The trade unions’ contribution was the wage freeze. It seems from discussions with employers, unions and others that this was effective. Between 1964 and 1969 average wages rose by about 5 per cent per annum in the modern sector (excluding agriculture), and considerably faster than this in some sectors (11.4 per cent per annum in manufacturing and construction). Thus a wage freeze, even for only one year, could have a sizable effect on wages. There is some evidence of increased claims for wage increases since the ending of the Agreement. Some of these may be an attempt to compensate for the freeze, others to register and proceed with claims before the Government’s promised guidelines become a reality. However, despite a few spectacular rises in wages it seems very un-
Labour market policies

Table 116. Range of wage increases awarded by the Industrial Court, 1969–72

<table>
<thead>
<tr>
<th>Period</th>
<th>Range of increases (per cent)</th>
<th>Number of awards included</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>From</td>
<td>To</td>
</tr>
<tr>
<td>Mid-1969 to mid-1970</td>
<td>7.4</td>
<td>10.0</td>
</tr>
<tr>
<td>Period of agreement: mid-1970 to mid-1971</td>
<td>7.6</td>
<td>10.0</td>
</tr>
<tr>
<td>Mid-1971 to date</td>
<td>3.9</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Note: the figures are derived from the files of the Industrial Court. They include increases only when the current as well as the proposed increase was included in the report on the award. Awards are given for different periods—sometimes one year, sometimes eighteen months—and sometimes the duration is unclear. Certain increases are backdated. The above figures do not make any allowance for different periods covered and are not to be taken as annual increases.

Table 117. Proportion of Industrial Court awards concerning wages, 1967–72

<table>
<thead>
<tr>
<th>Year</th>
<th>Total number of awards</th>
<th>Awards concerning wages</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>1967</td>
<td>49</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>1968</td>
<td>50</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>1969</td>
<td>51</td>
<td>17</td>
<td>33</td>
</tr>
<tr>
<td>1970</td>
<td>43</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>1971</td>
<td>32</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>1972</td>
<td>11</td>
<td>2</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: as for table 116.

Table 118. Changes in consumer price indices, 1969–71 (Percentages)

<table>
<thead>
<tr>
<th>Index</th>
<th>December 1969 to December 1970</th>
<th>December 1970 to December 1971</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi wage earners, index (lower income)</td>
<td>+1.6</td>
<td>+0.7</td>
</tr>
<tr>
<td>Nairobi middle income index</td>
<td>+2.3</td>
<td>+1.2</td>
</tr>
</tbody>
</table>


likely that there will be a big enough acceleration of wage claims to cancel out the effect of the freeze. An analysis of disputes settled in the Industrial Court does not indicate any acceleration either in the number of claims or the size of the awards. Table 116 shows the range of percentage increases in wages awarded by the Industrial Court before, during and after the period of the Tripartite Agreement. Awards made during this period came into effect only when the Agreement had expired.

The figures in table 116 do not suggest any increase in the number or value of the awards, though a more detailed analysis of the individual awards would
have to be made to show that the reduction was significant. In particular, cases differ substantially and so do awards, and thus no generalisation can be made on the basis of three awards. Table 117 gives an analysis of the number and proportion of awards concerned with wages, which is also of interest.

Again there is no sign that the number of disputes concerned with wages has risen since the Agreement ended. It therefore seems probable that there has been some long-term effect on the level of wages as a result of the wage freeze but the effect is likely to be slight. Wages may be 2 to 3 per cent below what they would otherwise be.

Despite a government commitment under the Agreement to “review both the rent control and the prices of certain consumer goods and services”, there was no price freeze to parallel the wage freeze during the period, and prices (including some government-controlled prices) rose, as table 118 shows. Wage earners whose wages were held constant as a result of the Agreement therefore suffered a slight loss in real income.

STRIKES

One of the major provisions of the Agreement was intended to rule out strikes and lockouts. Table 119 suggests that this had a significant effect on industrial disputes. All the figures by which strikes could be measured, numbers of strikes, numbers of strikers and numbers of days lost during the disputes, were substantially lower during the period of the Agreement than at any other time since independence. They remained low for the last six months of 1971 but appear to have risen again since. The strikes that did occur during the Agreement were chiefly wild-cat strikes of short duration.

A COMPARISON WITH 1964

In content the two agreements were very similar, though in 1964 the Government undertook to expand employment by 15 per cent, and the employers by 10 per cent. But they were signed against significantly different backgrounds. In the first place, the 1964 Agreement was reached at a time when employment had been falling steadily and substantially—by 83,000 or 13.3 per cent between 1960 and 1963—and the existence of a serious employment problem was first recognised. In the second place this Agreement was reached just after independence, when it was particularly important for the Government to reassure its own people and the world that it was in command of events. One of the main reasons was the determination to show people overseas, particularly foreign investors, the spirit of co-operation that united employers, workers and Government and that was symbolised in the Tripartite Agreement itself. Indeed some of the fall in employment was due to lack of confidence, so that merely by creating confidence the Agreement contributed to its own, and other, objectives. This situation did not apply in 1970. In the third place the argument (repeated in 1970) that temporary emergency measures were required to give the Government time to work out long-term measures had a credibility, coming straight after independence, that it inevitably lacked the second time.
The 1964 Agreement was greeted with an enormous and immediate response, and within two weeks 205,000 workers had registered, of whom 106,000 (the African unemployed—former wage earners and landless persons) were classified as having top priority. Registration was then stopped. By the end of 1964, some 34,000 additional workers had been taken on under the scheme, 28,000 in the private sector and 6,000 in the public sector. One of the most notable features of the 1964 Agreement was the failure of the public sector to meet its commitments. This was attributed to the local authorities’ lack of finance, the inability of the East African Common Services Organisation “to contribute because of the three-territory nature of the organisation”, and the delay of the central Government caused by “regionalism”\(^1\). However, employment opportunities provided under the settlement schemes were not included in the government contribution.

Despite the claims that 34,000 extra workers were engaged under the scheme, total employment increased by less than this—by about 18,000 after allowing for the additional coverage under the 1964 enumeration. The difference is largely due to the drop in employment in agriculture due to the break-up of the large farms and the consequent switch from employment to self-employment. Some of the extra jobs came from transforming casual into regular employment—among men the proportion of casual employees fell from 7.5 to 6 per cent between 1963 and 1964. There was also a substitution of adult for child labour with an absolute drop in child labour of 3,000 between the two years. Some of this fall must have been due to the change in agricultural employment.

The Agreement was extended for another three months in 1965 and then stopped. During the extension the Government and local authorities increased their provision so that the final total was over 38,000.

It is difficult to tell whether the 1964 Agreement had any long-lasting effects on employment, because 1964 was a turning point. After falling since

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\(^1\) Labour Department report for 1964.
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Table 120. Annual number of strikes, employees involved and man-days lost, 1962–65

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of strikes</th>
<th>Employees involved</th>
<th>Man-days lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1962</td>
<td>285</td>
<td>132,433</td>
<td>745,799</td>
</tr>
<tr>
<td>1963</td>
<td>230</td>
<td>54,428</td>
<td>235,349</td>
</tr>
<tr>
<td>1964</td>
<td>294</td>
<td>67,155</td>
<td>167,767</td>
</tr>
<tr>
<td>1965</td>
<td>200</td>
<td>105,602</td>
<td>345,855</td>
</tr>
</tbody>
</table>

Source: Department of Labour reports.

1960, employment began to rise slowly in 1964 and the rise has continued since then, though performance has varied between sectors. Employment in private industry and commerce was the same in 1965 and 1964. Vacancies registered were over 20 per cent lower in 1965 than in 1963, while applications for employment were 12 per cent higher and placings about 10 per cent lower, these figures being based on the monthly average for the first eight months of 1965 and the monthly average for the whole of 1963. They suggest that the agreement had only temporary effects.

The influence on wages is also difficult to assess, with the changed coverage of the enumeration of employees. The average wage increase in 1964 over the previous year was 5.7 per cent, compared with 12.9 per cent in 1963 and 7.3 per cent in 1966. But the improved coverage of the enumeration almost certainly increased the representation of below-average workers and hence contributed to the apparent reduction in the rate of increase. In any case, an increase of 5.7 per cent can hardly be described as a success for the wage freeze. Table 120 shows that 1964, with a total of 294, saw more strikes than any other year in the 1960s. The number of employees involved was, however, less than in some other years, as was the number of man-days lost.

The 1964 Agreement did not presage industrial peace in the way that the 1970 Agreement seems to have done.

CONCLUSION

Both agreements succeeded in generating a certain amount of additional employment in the short term. Yet they probably contributed more to raising expectations than to realising them, as is shown by the much greater number of registrations than of jobs provided under the scheme.

The additional employment generated almost certainly has had no lasting effect. None of the firms we saw had undertaken any major or long-run reorganisation in response to the 1970 Agreement. Those who had been forced to provide more employment than they needed were waiting for natural wastage and expansion to absorb it. This generally happened quickly, perhaps in less than a year. During that period fewer additional employees were taken on than normal, so that the net effect of the Agreement was to bring a certain amount of employment forward over a limited period of time.

Under the 1970 Agreement employers (and the economy) gained by an apparently successful wage freeze. There has also been a substantial reduction in the number of industrial disputes. Again, this is only of short duration.
The general conclusion is that a short-run agreement of this nature can achieve little. It may require a good deal of co-operative spirit on the part of both employers and trade unions, and a good deal of administration on the part of the Government, for an essentially short-term gain. Long-run agreements to expand employment by a certain amount every year could have a lasting effect on the pattern of production and the capital-intensiveness of investment. However, long-run agreements of this nature would have implications for costs, profitability and hence the level of investment, as well as for the level of wages, consumption and savings, and these effects could well cancel out any employment generated by the scheme. In the same way a long-term incomes policy may improve income distribution and contribute to the expansion of employment. But short-term measures use up such good will and administration as there is, and have virtually nothing to contribute to the solution of the long-term problem. Indeed these agreements may even be counter-productive in leading employers to reduce their permanent labour force so as to reduce their commitments under them.
This paper aims at identifying the possible contributions of labour legislation and the industrial relations system to a policy for creating employment.

As a point of departure, it should be noted that the bulk of the protective labour legislation now in force in Kenya was enacted in the pre-independence period. The Shop Hours Act and the Employment Act date back to 1925 and 1938 respectively and other pieces of legislation such as the Employment of Women, Young Persons and Children Act, the Factory Act and the Regulation of Wages and Conditions of Employment Act also preceded the establishment of the Republic of Kenya. Some of the provisions contained in these laws may thus no longer be attuned to present-day requirements or to the existing institutional structure of the country. This is particularly true of the Employment Act of 1938, which has now a very limited operational value but which could—if properly redrafted—provide a flexible framework for the conclusion of labour contracts in both the urban and agricultural sectors. Some of the assumptions on which the Employment Act was based, especially those concerning the care of employees and the employer’s responsibility for housing and medical care, need to be re-examined in the light of structural changes in Kenyan agriculture and of the expanding responsibilities now assigned to the local and national authorities. It should be added that we are aware of the Government’s efforts to undertake a major revision of the Employment Act.

One word must be said about the implementation of labour law. A quick look at the inspection activities of the Ministry of Labour, and particularly at the number of inspections, the content of inspection reports and the amount of arrears collected, indicates that the rural sector lags considerably behind the urban sector in the enforcement of labour standards. This suggests that not only the difference in the standards but also the differences in their application may have a bearing on the differences in income between rural and urban areas. We realise that it is not easy to enforce minimum wages and other standards relating to labour employed for wages on small holdings in the agricultural sector, particularly in the coffee industry and in mixed farms.

1 In 1968, for instance, the number of inspections carried out in rural areas was 416 against a total of 3,776 in urban areas. See Ministry of Labour: Annual report, 1968 (Nairobi, 1970), p. 17.
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It is our conviction, however, that more systematic efforts on the part of the Labour Department and trade unions may help considerably to dispel the notion that agricultural labour is transitory and to encourage regular and casual labour to stay in the rural areas.

The admission of women to employment

Labour legislation is first of all influential in setting the broad limits of competition within the labour market. Regulations on the work of women and children, for instance, establish legal requirements for admission to employment. The existence of pension plans, especially under government-sponsored social security programmes, affects the participation of the older worker in the labour market. Changes in the provisions may have important implications on participation rates, labour turnover and even the level of employment.

Provisions governing the admission of women to employment are of significance in Kenya because of the increase in female participation rates. The registration of women in employment exchanges has increased sharply during the last years and the 1970 report of the Ministry of Labour indicates that there was a “tremendous interest shown by women in paid employment”.1 Other recent reports have pointed out that women are entering the modern sector of the economy in increasing numbers and are learning to exercise their political and legal rights.2 Are the provisions in force an obstacle for the growing number of women seeking gainful employment?

Existing statutory regulations affect only the employment of women in mines and industrial undertakings; those concerning the latter limit themselves to prohibiting women’s work between 6.30 p.m. and 6.30 a.m. Exceptions to the prohibition refer to emergency, non-manual labour and material subject to rapid deterioration.3 It should be added that the term “industrial undertaking” is not limited to urban areas and includes factories on the plantations.

At first glance these provisions do not appear to be unduly restrictive. The problem arises, however, in connection with the practice of rotating shifts followed by a number of undertakings engaged in a continuous type of operation. In these undertakings the exclusion of women from night work actually entails their exclusion from job opportunities. Three issues are involved here: the need to protect women from physical and moral hazards 4, the need to adjust regulations in force to the changing role of women in present-day Kenyan society, and the need to avoid their virtual exclusion from employment in an important sector of industry. It may well be that the addition of another exception concerning the rotation of shifts would be sufficient to cope with the immediate problem. However, an effective widening of opportunities available to women would also require a broader inquiry into the suitability of other provisions currently contained in a number of regulations and agreements.

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3 Laws of Kenya, Chapter 227.
4 This question is covered by the Night Work (Women) Convention, 1919 (No. 4), which has not been ratified by Kenya.
A number of regulations and agreements provide for lower minimum wage rates for female employees of 18 years and over than for male employees of the same ages. It is true that these differences are sometimes justified by the fact that a few wage regulations prescribe a shorter normal working week for women than for men, but it is equally true that hourly rates are also lower for women and usually amount to two-thirds or three-quarters of the wage rates stipulated for adult males. Moreover, housing allowances are sometimes provided for male employees only or are fixed at substantially different rates according to the sex of the employees. These differences, based solely on the sex of the employees without reference to differences in the amount or quality of work, are not conducive to an effective absorption of the female labour force and may call for appropriate revisions of the relevant statutes. As regards housing allowance, for instance, it is the position of the worker as head of the household rather than the sex that should be taken into account.

Some of the problems now confronting women workers spring from the very nature of the labour contract usually offered to them and therefore are not open to easy solution. It may be noted, for instance, that in the agricultural sector women are normally engaged as casual labour and consequently are not entitled to the protection afforded permanent workers in the form of annual leave, sick leave, severance pay and other social security benefits. With regard to regular female employees, however, the efforts undertaken by the Industrial Court and other national authorities to place women on the same footing as male employees doing the same tasks deserve further confirmation and expansion.

Labour turnover and early retirement

Unemployment has made it important to change the ages for pensions and retirement and so release jobs for younger workers. It is recognised that the supply of wage jobs arising from the turnover of labour has been declining over the last two decades. At the same time the average age of urban wage earners has been rising steadily. This seems to indicate that people hold their jobs until they reach the age of retirement, thus blocking the way of younger people to wage jobs.

The current retirement ages under the government employees’ pension fund are 50 for voluntary retirement and 55 for compulsory retirement. This fund provides non-contributory pensions at a comparatively generous rate for pensionable officers in the civil service. It may be noted that the issue of earlier retirement was raised in 1971 by the Civil Servants’ Union in a petition submitted to the review committee of the civil service. The Union asked for a change of the retirement ages to 45 for voluntary retirement and 50 for mandatory retirement, but the petition was accepted only partially and in respect of the higher grades of the civil service. It is not a condition of the payment of pensions to civil servants that they shall not take up further employment, but further employment with the Government is excluded.

1 The principles contained in the Equal Remuneration Convention, 1951 (No. 100), which has not been ratified by Kenya, may be a useful guide.
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The National Social Security Fund Act of 1965 lays down no retirement age. The Social Security Fund is a provident fund financed by employers and employees, who each contribute 5 per cent of earnings. The fund is primarily intended as protection for old age. On attaining 60 years of age or on retirement from employment, whichever is later, the employed person is entitled to withdraw the amount standing to his credit in his own individual account. The amount is the total of contributions paid in by the employee and his employer plus an increase on account of interest, and is paid out as a lump sum. This lump sum cannot be regarded as effective protection for old age. The recipients can hardly live on it, nor can they afford to remain outside the labour force. While it is a condition of drawing benefit that they retire, there is no checking, or real possibility of checking, that the beneficiary does not again take up paid employment.

It has been suggested that earlier compulsory retirement than exists at present under the government employees' pension fund, or provision for earlier entitlement to benefit from the Social Security Fund, would contribute towards settling more people on the land and modernising traditional forms of agriculture by bringing a spirit of innovation and progress to the land. It is thought that a growing number of school leavers would be encouraged to apply for jobs in the modern sector and so relieve the frustration felt by youth. It has also been said that the faster turnover brought about by early retirement would gradually lead to the employment of people more highly qualified in terms of formal education.

However, a number of factors suggest that the revision of the age of retirement is unlikely to create many new vacancies for employment. With regard to the government employees' pension fund, it may be noted that the current age of retirement is already comparatively low. Experience elsewhere suggests that any lowering of the pension age by five years may be expected to increase the cost of pensions by 30 to 40 per cent. It appears doubtful whether the Government, which currently bears the expense of civil servants' pensions, would be prepared to meet such increased costs. In any case, as has been mentioned above, government pensioners are not precluded from working outside the government service. As far as the Social Security Fund is concerned, it is clear that the benefits available at 60 are so slight that members of that Fund will neither wish for nor be able to afford retirement. It seems unrealistic to expect many pensioners or social security beneficiaries to take up work in agriculture after years of urban employment.

Whatever validity there may be in the argument that early compulsory retirement can create employment vacancies, such retirement must be applied differently to government pensioners, who have a pension based on 25 or 30 years' service, and social security beneficiaries, whose benefits are such that they must re-enter the labour force or be reduced to penury. In countries with established general pension schemes, a high proportion of pensioners find it necessary to continue in paid employment. The proportion is likely to be higher in Kenya, which has no general pension scheme and whose provident fund benefits are insufficient for subsistence.

Experience in other African countries where provident funds have been established in recent years suggests that there will be an increasing demand for effective protection in old age. Such protection is urgent in Kenya and
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can best be achieved by transforming the provident fund into a social security scheme based on the widest possible coverage and the pooling of risks. The cost of such a scheme increases progressively with the lowering of the age at which pensions may be awarded. While it is true that lowering the age of entitlement to benefits under the existing provident fund does not endanger that fund, because each contributor's entitlement is limited to the amount standing in his individual account, lowering the age of entitlement to the present benefits cannot be expected to create a significant number of jobs.

Hours of work

Hours of work can also affect the amount of employment. No general legislation has yet been enacted on this matter, though there are various specific and industry-wide regulations. The tertiary sector is covered by the Shop Hours Act and the Mombasa Shop Hours Act, which provide respectively for an 8-hour working day (the total period of work from the beginning to the end of work, including meal times, must not exceed 9 hours) and a maximum working week of 49 hours, excluding meal times. Wages orders also contain regulations on hours of work applicable to the industry or trade concerned. A number of awards relating to the same subject in specific industries or undertakings have been made by the Industrial Court. Finally, collective agreements containing provisions on hours of work have been concluded in numerous industrial and commercial concerns.

We have already noted in our report the differences in the numbers of working hours in industry established by wage regulation orders. There are no general regulations on overtime. Some wage regulations indicate that overtime shall be payable at one-and-a-half times the basic hourly rate and for work performed on Sundays and holidays twice the basic hourly rate, while others provide for one-and-a-quarter and one-and-a-half times respectively. Overtime is particularly frequent in the transport, motor, engineering and construction industries and is becoming rather common in the manufacturing industries. The replies to the questionnaire on labour turnover and overtime sent out by the Ministry of Labour show some alarming signs of a propensity to work overtime in the manufacturing sector. To cite just a few examples: one firm, with a labour force of 177 people, employed 165 of them for a total of 2,500 hours of overtime during the survey week; another, employing a labour force of 581 workers, accumulated a total of 11,250 hours of overtime during the same week; in a third, employing 89 people, the whole labour force was involved in overtime work during the week; various cases of overtime in excess of 1,000 hours a week were reported in medium-sized firms employing between 75 and 250 employees. Indeed, the practice of overtime has become so widespread that in some industries workers tend to work at a slow pace and save their energies in anticipation of overtime.

Obviously there is room here for a better allocation of time. The first step should aim at the reduction of overtime. Of course, there are some industries, such as transport, where a certain measure of overtime is inevitable and could be reduced only through costly improvements in organisation and methods. The reduction of overtime in port working, for instance, depends to some extent on the introduction of new methods of handling cargo that would facilitate an orderly turn-round of ships and a quicker movement of inland
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cargo. The other industries, however, where workers are over-employed systematically and without special justification, clearly invite substantial changes.

Three measures are usually envisaged in this respect. The first concerns the fixing by the Government of strict limits to the total number of hours of overtime that may be worked during a specified period of time. The second deals with the established rates for work in excess of normal hours, which could be increased in some industries in order to make overtime unattractive to management. Finally, special permits could be required from the Ministry of Labour for certain kinds of repetitive overtime; in granting these permits the Ministry should have regard to the unemployment situation in the area concerned and the feasibility of using and training replacements.

Some difficulties may arise in applying the more drastic measures. We were informed that in some industries it was the shortage of skills that caused overtime and that not one craftsman was unemployed. In these industries the gradual reduction or elimination of overtime would be contingent on the availability of skilled manpower, which means that the elimination of overtime is related to programmes designed to accelerate training. Our investigation of overtime suggests, however, that something more immediate and urgent could be done for the unskilled. It is suggested, for instance, that the Government invite employers' and workers' organisations in the industries particularly concerned to examine the overtime situation with a view to reducing the current amount of work in excess of normal hours and promoting further recruitments.

Minimum wages and fringe benefits

Minimum wages have been discussed in Chapter 14 of our report, and we need say no more here.

Fringe benefits are usually provided for in the wage regulation orders: they include annual leave, sick leave, holidays with pay, meals and accommodation allowances and safari or travel allowances. As may be expected, some of these fringe benefits are frequently improved by collective agreements. The agreement concluded between the employers in the petroleum industry and the Kenya Petroleum Workers' Union, for instance, has provided for many years for a number of days of annual leave and paid holidays representing substantial increases over the minimum established in the relevant wage regulation orders. A few additional fringe benefits, such as long-service increments and paid maternity leave, appear only in certain collective agreements. For the most part, however, employers in other industries pay only the fringe benefits required by wage regulation orders. The cost of these benefits cannot be estimated accurately, because of the variations from industry to industry. While fringe benefits tend to constitute a growing part of the total cost of labour, at present only annual leave, paid holidays and sick leave can be regarded as major items in this cost.

Termination of employment

Security of employment represents one of the most sensitive areas in the relations between labour legislation and the promotion of employment. Any employment policy should, of course, start by protecting those who are
already employed from arbitrary dismissal and the consequences of unjustified retrenchment. Where provisions governing the termination of employment become unduly rigid and restrictive, however, employers may encounter difficulties in adjusting the size of the workforce to their requirements, and this may in turn lead them to reduce recruitment owing to their reluctance to risk saddling themselves with manpower that may prove to be excessive at a later date.

Until 1971 there were no statutory rules governing the conditions under which contracts of employment were to be terminated. Except for a minor provision in the Employment Act, the matter was largely left to voluntary arrangements between the parties.

The legal position underwent a drastic change with the amendment of the Trade Disputes Act in 1971. The new policy provides for the intervention of the Industrial Court where there are dismissals or reductions of the workforce. With regard to dismissals, the Act stipulates that where the Industrial Court determines that an employee has been wrongfully dismissed, “the court may order that employer to reinstate that employee in his former employment and the court may in addition to or instead of making an order for reinstatement award compensation to the employee up to a maximum of twelve months”. With regard to redundancy, it stipulates that all cases shall be subject to the approval of the Industrial Court.

It is too early to ascertain the effects of these regulations on the promotion of employment. While the short-run effects are clearly favourable to the maintenance of the present level of employment, the possible long-run effects call for some observations.

Wrongful dismissal, it is plain, may require further statutory clarification in order to avoid uncertainties and unnecessary litigation. As the Act stands now, the Industrial Court enjoys broad discretionary powers to determine whether or not an employee has been wrongfully dismissed. Despite the reputation of impartiality that the Court currently enjoys, it might be desirable for the legislation to define valid reasons for dismissal in more specific terms. This would no doubt help the Court and the parties concerned to discharge their responsibilities.

A clear definition of the conditions under which contracts of employment may be terminated is all the more necessary as in cases of arbitrary dismissal the Court may order reinstatement and failure to comply with an order of reinstatement is regarded as an offence that may entail severe fines of up to £100 for every month during which it continues. This poses some ticklish questions about the nature and extent of the measures for enforcing labour law. While we are convinced that security of employment calls for strict enforcement, there is room for concern about the implications for investment of a sanction that smacks of criminal law. To remove the stigma of a criminal offence, an employer could equally well be obliged to maintain the payment of wages by a reinstatement order enforceable through civil procedures. This would be perfectly effective and less likely to deter investment and perhaps even the expansion of employment.

Turning now to the treatment of redundancy, it should be said from the outset that this can be a more significant issue than the treatment of individual cases of termination based on the conduct or capacity of individual employees.
Questions of redundancy in the past have frequently involved large numbers of employees who have been laid off for the sake of capital-intensive techniques or for other reasons incompatible with a sound employment policy. Small wonder that labour organisations have viewed redundancy with great concern and pressed for the adoption of the new legislation. The employers, on the other hand, have a certain apprehension lest under the new law the power to determine the size of the workforce be taken out of their hands.

The requirement that all cases of redundancy shall be approved by the Industrial Court is thus a double-edged instrument that may contribute greatly to the implementation of the employment strategy, but may also act as a brake on future investments. The immediate effects are favourable, for the new regulation provides a form of shock therapy and the Court has already announced that decisions concerning retrenchment should take into account the interests of the industry and nation as well as those of the employer concerned. Much will depend, however, on the way in which the new statute is administered. If the Court or the legislature succeeds in establishing reasonable, objective and precise principles to be followed by private firms before requesting approval and insists on the need for prior consultation with the unions concerned, the new approach may make a valuable contribution to the employment policy.

It is reassuring in this respect that the provisional rules established by the Ministry of Labour for the handling of redundancy cases attach particular importance to the previous exhaustion of voluntary procedures. Under these rules, where a redundancy is likely the employer should consult the appropriate union and report any agreement reached to the Ministry of Labour for recording purposes only. When no agreement is reached, the case is referred to the Ministry for conciliation and it is only if conciliation fails that the matter is referred by the Ministry to the Industrial Court. Since no redundancy is admitted until an agreement has been reached or the Industrial Court has given its award, it would be useful to complement these rules by fixing a time limit on receipt of the application from the employer within which the approval could be granted or refused by the Court. Something more than the procedural rules is obviously necessary. The competent authorities should as soon as possible lay down valid grounds for accepting redundancy in the light of—

(a) the operational requirements of the enterprise and the appropriate factor mix of each industry;

(b) the need to introduce economies for marketing reasons and the demands concerning the maintenance of a stable regular labour force; and

(c) the feasibility of resorting to methods short of termination, such as transfers, the restriction of overtime, or the sharing of available work.

Collective bargaining

As mentioned in the body of our report, there are two basic forms of negotiation. One uses the machinery of wages councils and is reflected in the proposals made for the regulation of wages and conditions of employment.

1 See Chapter 15.
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The other is a more orthodox version of collective bargaining that leads to the negotiation of agreements fixing conditions of employment over and above the minima. The second form of negotiation covers some 250,000 workers in Kenya. Negotiations are usually conducted by several employers together, though other patterns of bargaining have also been established.

When the Industrial Court was established, there arose a certain tendency to by-pass collective bargaining in favour of Court adjudication. Since this trend involved the risk of a gradual weakening of collective bargaining the Court quickly sought to discourage unnecessary recourse to judicial procedures and to promote effective collective bargaining. The self-restraint exercised by the Court in this respect is shown by the number of disputes registered during the last five years.

The functioning of collective bargaining has recently been affected by the requirement that all wage agreements shall be subject to approval by the Industrial Court. Employers and trade unions that have entered into a collective agreement are under an obligation to lodge a copy with the Ministry of Labour. The Minister may object to the registration of an agreement, and he is then obliged to give his reasons. The Industrial Court, in turn, is entitled to accept the registration only when the agreement complies with the principles laid down for the Court by the Ministry in charge of finance.

This far-reaching provision is intended to be a basic tool in the implementation of a wages policy, which in turn is envisaged as an important contribution to the expansion of employment. One of the measures recommended by the Select Committee on Unemployment deals with the control of increases in income in the urban areas as a means of bridging the difference in income between rural and urban areas. The principles mentioned above and the subjecttion of wage agreements to approval by the Court would serve to implement this recommendation and to carry out a policy of stabilisation.

When the mission visited Kenya, the principles had not yet been laid down and section 4 of the Trade Disputes (Amendment) Act was not yet in force. The fact that the principles were to be laid down at the discretion of the Minister might entail some difficulties but at the same time it left open the possibility of adjusting the principles to the requirements of a comprehensive employment policy.

Labour disputes

Labour disputes become important for an employment policy when they cause a disproportionate loss of work, which in turn entails a loss of market opportunities. While a certain degree of conflict and dissension is inevitable in the conduct of industrial relations, frequent strikes and the loss of many workdays signify that human resources are not being fully utilised.

During the early 1960s, there was an upsurge of protest and activism that brought about some disruption in production processes and led to the adoption of more stringent procedures for settling disputes. In recent years there has been an impressive fall in the number both of strikes and of man-days lost.

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This picture of relative industrial peace may be attributed to two factors. On the one hand, there have been a more effective use of the private negotiating machinery and a more conscious effort to settle disputes through direct arrangements. Practically every collective agreement provides for voluntary machinery and stipulates that endeavours shall be made by both parties to reach a settlement. Where voluntary arrangements fail and a dispute is reported to the Ministry of Labour, the Minister first seeks the advice of a tripartite committee and then attempts to achieve a settlement through conciliation procedures, the appointment of a board of inquiry, reference back to the parties in dispute for further negotiations or reference to the Industrial Court. Proceedings before the Court are conducted with proficiency and impartiality. Finally, the Minister of Labour is entitled to declare unlawful certain types of strikes, including strikes in essential services when specific requirements have not been complied with, sympathetic strikes not related to a dispute in the same industry and strikes in which the parties have not exhausted the possibilities of negotiation or there is an agreement or award regulating the matters under dispute.

The system of settling labour disputes has thus worked with relative efficiency, but there is still room for improvement. Unofficial or wild-cat strikes occur sporadically in various industries, a number of disputes stem from misunderstanding or lack of knowledge in the undertaking, and some delays are noticeable in the handling of disputes referred to the Ministry of Labour, owing chiefly to lack of staff. These shortcomings, however, are easy to put right. Intensive training in personnel management, workers' education and industrial relations would help to make the system work even better.

Popular participation

Another form of direct contribution to the promotion of employment is the expansion of popular participation, an essential element in any modern development plan. The institutions of the industrial relations system provide a natural conduit for the channelling of popular participation and help to ensure that national plans are understood and supported by the population. No doubt other social institutions, including young people's and women's organisations, also have important roles, but the strategic place that labour and employers occupy in society coupled with the weight and significance acquired by their organisations place a higher premium on their collaboration.

In Kenya there are some additional reasons that highlight the need to enlist the support of trade unions and employers' organisations. Trade unions have paralleled and greatly contributed to nationalism and the realisation of an independent republic under majority rule. The recognition of the responsible role that they must play in nation-building dates back to the beginnings of independence and has been reiterated in congresses of the Central Organisation of Trade Unions and its constituent unions. On occasions, this responsibility has even been construed as encompassing efforts to increase employment.

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This identification of trade union and national goals is a definite advantage that should be exploited fully and effectively by those in charge of implementing the employment policy.

Similar potentialities exist with regard to employers' organisations. The Federation of Kenya Employers has collaborated with the Government in the past and has repeatedly expressed its willingness to support development programmes and give advice on the implementation of plans. As the President of the Federation puts it, "employers must realise and accept that our social responsibilities go beyond the welfare of our own families and employees and that we simply cannot turn a blind eye or deaf ear to the human problems affecting other members of the community". So favourable an attitude augurs well for the implementation of the employment policy as well as for the encouragement of further collaboration within the enterprises. Not only could employers' associations promote a modern and appropriate view of the operational requirements of their members but the latter could also make efforts to stabilise employment through better planning and better facilities for production, sales and storage.

The role of the Ministry of Labour

There is no point in making blueprints for reform or social change unless the institutional infrastructure is strengthened and reoriented in accordance with the objectives of a comprehensive employment policy. This is particularly true in respect of the Ministry of Labour, the agency that would be responsible for the elaboration and implementation of most of the proposals made throughout this paper.

As regards its traditional functions, there is no doubt that an effective enforcement by the Ministry of Labour of labour standards in rural as well as urban areas would help greatly to bridge the gap in living and working conditions between the two areas. It would also be incumbent upon the Ministry of Labour to minimise work stoppages through the introduction of more rapid procedures for the disposal of labour disputes. Moreover, the Ministry should go beyond the daily routine of settling strikes and place more emphasis on preventive methods and on fostering a deeper understanding among labour officers of the connection between industrial relations and development.

It is held today, however, that the Ministry of Labour should not be limited to its traditional functions but should also contribute effectively to the development process. The Ministry of Labour should participate in the elaboration and implementation of the manpower planning process and should be in a position to make recommendations on measures for the promotion of employment. The Ministry can be particularly useful in helping to collect (and in collating) information on the unemployed in rural and urban areas, in maintaining registers of jobseekers, vacancies and placings, in identifying training needs, in facilitating the adequate selection of jobseekers to fill vacancies and

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2 Federation of Kenya Employers, annual general meeting, 1971, speech by the President, Mr. C. H. Malavu.
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in undertaking studies on labour mobility and turnover, migration, seasonal employment and the utilisation and productivity of labour. Finally, the close contacts between the labour administration, employers, workers and unemployed can be used to stimulate popular participation and to ensure that the views of the relevant organisation are heard at all stages of the planning process.

To achieve all this, the present structure of the Ministry of Labour needs to be revised and its budgetary allocations need to be increased considerably. The report of the commission of inquiry on the public service published in 1971 indicates that the Ministry of Labour has suffered from the lack of the right type of manpower for professional posts, and includes the Ministry of Labour among services whose effectiveness could be improved. ¹

¹ Ndegwa Commission report, op. cit., p. 137.
For the past 15 years or so the number of employment offices in the principal townships and plantation areas has remained about 23. For a long time—until 1958 or 1959—there were separate employment offices for Africans, Asians and Europeans. The African employment offices dealt with both men and women while the four Asian employment offices (in Nairobi, Mombasa, Nakuru and Kisumu) and the one European employment office in Nairobi registered only male jobseekers. A separate officially sponsored women's office operated by the East African Women's League, however, existed in Nairobi for European and Asian female jobseekers. The racial segregation was gradually abolished but the separate labour office in Nairobi for women still exists, though it is now open to all races. In areas other than Nairobi, the employment offices deal with both men and women. In 1967 a separate office, the Kenyanisation of Personnel Bureau, was set up to handle applications for work permits and the placement of secondary-school leavers and skilled managerial and professional persons with a view to the gradual Kenyanisation of jobs.

Besides the official employment services provided by Ministry of Labour employment offices, there are also several registered private profit-making employment offices that largely specialise in placing certain categories of person: stenographers, secretaries and middle- and high-level manpower. The number of these is not known precisely, though it is likely to be significant. Probably only a few, including some connected with business colleges, work on a large scale. These agencies not only charge a registration fee to applicants but also take a share of their salaries on employment.

Two types of employment service thus exist in Kenya—which is very uncommon in African countries. The government employment offices provide a free service for employers and workers, while the private agencies charge a fee and commission that in some cases are exorbitant and smack of exploitation.

The salient features of the employment service, however, are that it is voluntary and that it is non-discriminatory. There is no compulsion either for workers to register with the employment offices before they can get jobs or for employers to employ persons only through these offices. The law, moreover, does not permit any discrimination on the basis of tribe, sex or creed.
BASIC AIMS

The most effective utilisation of manpower, which is of vital importance, particularly in a country short of skilled manpower, is facilitated by the employment service, which—

(a) brings workers and employers together so that the right man gets the right job;

(b) reduces the frictional unemployment of skilled manpower that exists either because potential employers and employees are not known to each other or are not in the same area or because the manpower available and the requirements of the jobs available differ slightly and need adjustment through the organisation of training or retraining facilities; and

(c) influences the occupational and geographical distribution of skill for its most effective utilisation.

The establishment of an efficient and organised labour market, which is of great importance in countries with a relative shortage of job opportunities, is facilitated by the employment service, which measures at intervals the supply and demand for manpower, assesses the size and composition of surpluses and shortages of manpower and the reasons for them and disseminates information on the unemployment situation, with a view, among other things, to helping the authorities concerned to take measures to reduce any imbalance between supply and demand in the labour market. The gathering, analysing and transmitting at regular intervals of the “signals” from the labour market is of vital significance for various economic, social and educational policies and programmes; the employment service, which remains in day-to-day contact with the local jobseekers and employers throughout the country, is in the best position to provide these “signals”.

An examination of the organisation and functioning of government employment offices reveals that the system leaves much to be desired and is far from achieving the major objectives mentioned above. While this is largely due to the fact that the role of the employment service as an effective instrument of manpower and employment policy has not yet been fully appreciated by the authorities concerned, the shortcomings in the organisation and functioning of the employment offices have considerably reduced their efficacy and utility. This will be borne out by the following account.

GOVERNMENT EMPLOYMENT OFFICES

The limited results obtained

The employment offices (the employment exchanges and the Nairobi labour office for women) and the Kenyanisation of Personnel Bureau do try to bring workers and employers together and reduce frictional unemployment, but the results are limited. In the first place, employment offices do not exist in all parts of the country. Secondly, even where employment offices exist, neither the employers nor the jobseekers make full use of them. The following figures show that only in about 7 per cent of cases did the jobseekers obtain work through employment exchanges.
Table 121. Methods used by male immigrants in eight individual towns in obtaining their first job  
(Percentages)

<table>
<thead>
<tr>
<th>Method used</th>
<th>Nairobi</th>
<th>Mombasa</th>
<th>Kisumu</th>
<th>Nakuru</th>
<th>Eldoret</th>
<th>Thika</th>
<th>Nanyuki</th>
<th>Nyeri</th>
<th>All eight towns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend or relative</td>
<td>35.3</td>
<td>33.5</td>
<td>50.4</td>
<td>38.8</td>
<td>34.6</td>
<td>30.9</td>
<td>48.0</td>
<td>42.2</td>
<td>37.6</td>
</tr>
<tr>
<td>Newspaper</td>
<td>6.4</td>
<td>5.9</td>
<td>10.8</td>
<td>1.5</td>
<td>1.9</td>
<td>6.2</td>
<td>6.0</td>
<td>3.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Employment exchange</td>
<td>4.8</td>
<td>4.3</td>
<td>8.5</td>
<td>3.0</td>
<td>1.9</td>
<td>33.3</td>
<td>8.0</td>
<td>2.4</td>
<td>7.0</td>
</tr>
<tr>
<td>Radio</td>
<td>0.3</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Heard of job and applied</td>
<td>15.2</td>
<td>21.6</td>
<td>10.8</td>
<td>4.5</td>
<td>3.9</td>
<td>9.9</td>
<td>—</td>
<td>7.2</td>
<td>13.3</td>
</tr>
<tr>
<td>Other method</td>
<td>18.2</td>
<td>19.7</td>
<td>9.3</td>
<td>16.4</td>
<td>17.3</td>
<td>13.5</td>
<td>34.0</td>
<td>32.5</td>
<td>18.8</td>
</tr>
<tr>
<td>Started own business</td>
<td>5.1</td>
<td>3.2</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2.0</td>
<td>4.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Still unemployed</td>
<td>14.1</td>
<td>11.8</td>
<td>9.3</td>
<td>32.8</td>
<td>40.4</td>
<td>6.2</td>
<td>2.0</td>
<td>7.2</td>
<td>13.8</td>
</tr>
<tr>
<td>No response</td>
<td>0.6</td>
<td>—</td>
<td>0.9</td>
<td>1.5</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Henry Rempel: Labour migration into urban centres and urban unemployment in Kenya, op. cit.
As can be seen from table 121, work was usually obtained through friends or relatives or other means most, if not all, of which must have involved nepotism or corruption. The employment exchanges served only 7 per cent of the cases. In Nairobi and Mombasa only about 4 to 5 per cent of the jobseekers used employment exchanges for obtaining their first job. Even on the rare occasions when employers seek the assistance of employment offices, it is largely, if not wholly, in respect of temporary and casual work. Most of the permanent vacancies are filled direct by the employers or their senior officers. In respect of vacancies for skilled work too the employers approach the exchanges only when their own efforts to secure qualified and experienced persons have failed. It is said that the employers then often stipulate very high qualification and experience requirements that cannot always be met by the Kenyans and that this enables them to secure work permits for non-citizens.

The possibility of a compulsory employment service

The non-utilisation or by-passing of exchanges by employers has led to frustration amongst the staff and loss of confidence in the employment service among the jobseekers. Suggestions have therefore been made from time to time for introducing an element of compulsion in the service. Reasons have included the advisability of organising the labour market as far as possible (with a view, among other things, to avoiding the social and economic abuses of direct recruitment) and that of providing more reliable data on unemployment and the functioning of the labour market. Compulsion could be introduced by requiring employers either to engage workers only through the exchanges or to engage only persons registered at employment offices. The Government, however, has not been in favour of any compulsory system on the grounds that the employment service is operated in accordance with an international labour Convention providing for a voluntary service, that it is not designed to produce complete statistics of unemployment in the country, that it covers only a limited number of centres and that its expansion would be very costly. The view was also taken that the system of compulsory registration would be inconvenient and "would almost certainly be abused—with little hope of redress without the employment of a large inspecting staff" and that "it would give no indication of the large numbers of voluntarily unemployed".

Compulsion in the employment services poses serious problems, and even in some countries where it has been introduced in one form or another, mainly to ensure a fair placement of jobseekers in the limited number of jobs available, it has been found that owing to various administrative bottlenecks the purpose has not been achieved. In the first place, it is not possible to set up employment offices in every centre and the introduction of the compulsory system in a few centres only frustrates the very purpose for which it is enforced. Secondly, the enormous administrative work involved in the compulsory registration of jobseekers is largely wasted. Similarly, unless the service

1 See the Employment Service Convention, 1948 (No. 88), Article 10.
is efficiently organised, compulsory resort to it may lead to bad relations with the employers, disruption and delay in their work and corruption in the employment service itself. Efficient organisation calls for a staff with sound occupational knowledge, skill in the allocation of work and high standards of integrity.

Compulsory use of employment service by the public sector

While it is not advisable to make either registration or placement compulsory, it is none the less essential that the employment offices be given a facelift and taken out of their passivity. Besides the attempts at persuasion discussed below, there are two possible ways of making the service effective, which have been followed successfully in several countries. In the first place, public-sector establishments, including government departments and undertakings owned or run by local governments, can be asked to engage their workers, except categories recruited through the Public Service Commission, through employment offices, recruitment from other sources being permitted only when these offices express and confirm their inability to find suitable persons. Public-sector undertakings have a great responsibility for ensuring that their employment policies are fair and just and for avoiding nepotism and corruption. They must also lead the way in making the employment service effective, and, since they are few in number, their requirements can be adequately and promptly met by the employment offices. It is stated in the second Development Plan of Kenya (1970–74) that “as a first step in improving the effectiveness of the official employment services, Government will require all vacancies in local government establishments to be filled through the official employment services”. This policy has not been followed so far, and the by-passing of employment services by these establishments as well as by government departments and autonomous corporations goes on unabated. There is considerable criticism of the “brotherisation” of jobs in the public sector, which can have serious political and social repercussions. Government offices and undertakings situated next door to an employment office are known to be openly by-passing it and recruiting their temporary and casual staff direct.

The compulsory notification of vacancies

The second measure that has been adopted with advantage in some countries is the compulsory notification of vacancies by employers to employment services without any obligation to engage through these services. This, on the one hand, provides useful information on the nature and extent of the demand and the way in which the economy of the country is progressing, and on the other hand, gives employment offices the opportunity of acting quickly and trying to fill as many vacancies as possible. It also gives useful information that helps to show, in appropriate tripartite forums, the extent to which employers are co-operating in making use of the service and thereby brings moral pressure on them to use it effectively.
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Persuasion and follow-up

In the absence of compulsion, countries have generally relied on persuasion and exhortation to employers to notify vacancies to the employment service and make fuller use of it. Kenya too has followed this line, but without much success, as is revealed by the figures quoted above. In December 1967 a conference of labour, industrial and personnel officers from the Government and the private sector was convened by the Ministry of Labour to consider, among other things, the question of the most effective utilisation of Kenya's employment services including the newly set up Kenyanisation of Personnel Bureau. One of the recommendations of the conference was that the employers should recruit their unskilled and semi-skilled workers through the employment exchanges and their skilled workers and secondary and post-secondary school leavers through the Kenyanisation of Personnel Bureau. The conference also condemned the practice of nepotism in the filling of vacancies and recommended that "any practice of employing individuals because they are friends or relatives of 'important people' should cease immediately".

These recommendations have remained largely on paper. A recent survey made by the Kenyanisation of Personnel Bureau in four industries—banking, insurance, petroleum and motor transport—revealed that only about one-third of the vacancies, which included the jobs that were to be Kenyanised under the law, were filled through the Bureau. Thus, as far as the voluntary utilisation of the services of the Bureau is concerned, the response from the employers has been very poor. The by-passing of the employment exchanges by the employers, as can be seen from table 121, is the rule rather than the exception. The official employment service cannot be blamed for certain factors influencing employers and causing them to by-pass it—for example, connections, the persuasiveness of the private profit-making agencies, pressure from, or the desire to please, persons in "responsible positions" or efforts at "brotherisation" by existing staff—but as much cannot be said of its failure to follow up cases or its deficient administrative organisation, both of which are factors contributing to its ineffectiveness. Action taken on the recommendations of the conference mentioned above has never been assessed, and the matter does not seem to have been pursued further at higher levels.

Information on the employment market

Table 122 gives figures concerning the employment exchanges. Such figures at best reflect trends in unemployment in the areas where the employment exchanges are situated. They cannot give an assessment of unemployment in a country—indeed they are not designed to. The figures for Kenya, however, because of serious lacunae in the manner in which they are compiled, do not even succeed in reflecting trends.

Figures concerning those who register at employment exchanges ordinarily include those who register during the month; those who were not placed at the end of the previous month; and those who have not renewed their registration because they have secured jobs on their own, are no longer interested in securing employment or do not care to report to the exchange. If monthly figures were worked out by adding the first two groups and subtracting the third,
Table 122. Activities of the employment exchanges, 1961–71

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of applicants</th>
<th>Number of vacancies notified</th>
<th>Number of placements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>71 302</td>
<td>26 148</td>
<td>21 414</td>
</tr>
<tr>
<td>1962</td>
<td>65 563</td>
<td>23 608</td>
<td>18 837</td>
</tr>
<tr>
<td>1963</td>
<td>53 022</td>
<td>15 079</td>
<td>12 487</td>
</tr>
<tr>
<td>1964</td>
<td>205 051</td>
<td>—</td>
<td>33 950</td>
</tr>
<tr>
<td>1965</td>
<td>51 083</td>
<td>8 394</td>
<td>7 620</td>
</tr>
<tr>
<td>1966</td>
<td>60 625</td>
<td>15 630</td>
<td>13 460</td>
</tr>
<tr>
<td>1967</td>
<td>62 365</td>
<td>18 210</td>
<td>13 842</td>
</tr>
<tr>
<td>1968</td>
<td>71 096</td>
<td>19 926</td>
<td>13 254</td>
</tr>
<tr>
<td>1969</td>
<td>58 097</td>
<td>12 929</td>
<td>11 443</td>
</tr>
<tr>
<td>1970</td>
<td>290 110</td>
<td>—</td>
<td>30 203</td>
</tr>
<tr>
<td>1971</td>
<td>53 355</td>
<td>13 343</td>
<td>11 061</td>
</tr>
</tbody>
</table>

1 These figures are influenced by the Tripartite Agreements of 1964 and 1970 and hence cannot have any relevance to earlier or later figures. 2 These are figures for eight months (May to December) only. The Tripartite Agreement of 1964 remained in force till April 1965. 3 These do not appear to relate to the full year since the operation of the Tripartite Agreement continued till about the middle of 1971.

Source: Annual reports of the Ministry of Labour.

they would have some meaning, provided that the weeding-out of non-renewals was done systematically every month. The figures published by the Ministry of Labour are the total number of registrations for the 12 months of a year, and since they include the persons who renew their registration every month or who, because of their failure to renew their registration, have to re-register, the total figures, even assuming that the weeding-out is done correctly, give a very erroneous and exaggerated picture of the total number of those who have registered in a year.

The weeding-out of the records of those who do not renew their registration and those who have obtained jobs from an employer because their names have appeared on a list submitted to him by the exchange leaves much to be desired. With regard to the former, the inefficiency or lack of proper understanding and training of the staff concerned is responsible for the retention of “dead” cards; with regard to the latter, both the failure of employers to notify the filling of vacancies promptly and the lack of follow-up by the employment service distort the statistical picture.

There is duplication between the employment exchanges and the Kenyanisation of Personnel Bureau in respect of skilled male jobseekers and boys leaving form 4, and between the Nairobi labour office for women and the Kenyanisation of Personnel Bureau in respect of skilled female workers and secondary-school leavers. Although the 1967 bipartite conference already mentioned recommended that the employment exchanges should deal with the registration and placement of unskilled and semi-skilled jobseekers and the Kenyanisation of Personnel Bureau with secondary-school leavers and applicants above that educational level, in practice the school leavers, particularly those who have failed in form 4 or passed with very low marks and have little hope of placement in clerical posts through the Kenyanisation Bureau, register
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both at the Kenyanisation Bureau and the employment exchange or the labour office for women. The duplicate registration of skilled jobseekers is partly due to the fact that this class has not been clearly defined and demarcated. The second five-year plan recognised the overlapping and indicated that the Government would introduce a better division of labour between the labour exchanges and the Kenyanisation of Personnel Bureau. Nothing has yet been done. The overlapping not only renders the statistical figures incorrect; it also results in confusion, inconvenience to employers and jobseekers and much unnecessary paper work in the three organs of the employment service. It is essential, therefore, that a clear demarcation between the functions of these three organs be made as soon as possible.

Even in the employment exchanges there is duplication of registration between offices in different areas. It is said that some jobseekers register at more than one employment exchange to improve their chances of placement. This was particularly true when fresh registrations were made under the Tripartite Agreements of 1964 and 1970.

The Kenyanisation of Personnel Bureau

The Kenyanisation of Personnel Bureau was set up towards the end of 1967 to advise the Principal Immigration Officer on work permits, to assist employers in the Kenyanisation of jobs, to act as an employment service for skilled, managerial and professional workers and trainees and to revive the careers advice programme. The Bureau was set up in Nairobi and two branch offices were opened later in Mombasa and Kisumu. The Bureau has two principal tasks: recommending the issue or refusal of work permits, numbering 28,677 at the end of 1970, and registering all form 4 students and skilled or trained persons who care to register with a view to placing them in jobs. The Kenyanisation programme has been carried out in stages by “calling up” certain occupations and later successive industries. The employers in an industry that is “called up” have to submit returns giving full details of their foreign employees. Each case is then examined and a work permit for a certain duration is recommended only if a suitable Kenyan citizen is not available among those registered with the Bureau. By now the majority of industries have been “called up”. The Bureau also collects detailed information from all form 4 pupils—whether they fail or pass later—and maintains a register of school leavers. When the secondary examination results are announced, the Bureau circulates the list first to the Ministry of Education for admission to form 5 and then to technical institutions for admission to various courses, keeping in view the preferences of the pupils. Finally the remaining names are transferred to a manpower register from which placements are made. This work, which properly belongs to the Ministry of Education, occupies much of the staff of the Bureau. The Bureau also enters the names of skilled or trained persons in the manpower register. As mentioned earlier, there is no clear definition of these persons and hence considerable duplication in registration takes place between the Bureau, the employment exchanges and the labour office for women.

While the Bureau has been largely successful in forcing employers to Kenyanise posts that can be filled by secondary-school leavers, though a
number of loop-holes still exist, it has not been able to perform the important function of collecting, analysing and disseminating "signals" from the labour market. Because of the pressure of routine work connected with the issue and renewal of the large number of work permits and the registration of all form 4 leavers, whether or not they will need placement in jobs, not much attention has been paid to statistics and analytical work. The statistics of jobseekers, placements, etc., compiled by the Bureau suffer from all the defects that exist in the employment exchange figures mentioned above—in fact more. The placement of persons, otherwise than under the statutory Kenyanisation scheme, is most inadequate, partly because the employers have not been very co-operative in notifying vacancies and partly because the Bureau is not organised to perform employment service functions. It does not publish periodical reports and the only information about its operation is contained in the annual report of the Ministry of Labour, which is published with a considerable time lag. This information too is largely of an administrative nature and does not include an analysis of the employment market.

PRIVATE PROFIT-MAKING EMPLOYMENT AGENCIES

A number of private profit-making employment agencies operate in Kenya, mostly in Nairobi. Nobody knows their exact number, but it is believed to be sizable. The second Development Plan summed up the situation as follows: "Recently there has been a significant growth in the number of registered private profit-making placement agencies. However, many of these firms fail after a short period, and of the small number which survive, only a few operate on a large scale. The more successful agencies are linked with business or commercial colleges, the idea being that the students, mainly stenographers and secretaries, are placed in employment through the agencies". The activities of these private agencies are thought to have increased rather than declined since the Plan was published, and not to be confined to the placement of stenographers and secretaries but to cover several categories of white-collared technicians and professional workers. These agencies are said to be of three types: the secretarial bureaux, which generally deal with temporary and short-term vacancies for stenographers and secretaries; the established employment agencies, which generally deal with permanent jobs and middle-level and high-level manpower; and bogus agencies, which register eager and needy jobseekers in return for a fee but are seldom able to get jobs for them. The financial arrangements of these agencies vary: some charge fees to jobseekers only, others to employers only and some to both. The fee also takes different forms: a registration fee varying from 20 sh. to 40 sh. or more, a standing fee of £100 or so from employers for high-level jobs and a commission payable by the jobseekers on getting jobs, which may be the first full month's salary or a percentage of the salary for several months. Some agencies pay the successful jobseeker themselves and recover from the employer the stipulated salary, about which the jobseeker is not informed. It is usual for the jobseeker to get only about two-thirds of what the employer pays monthly to the agency.

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1 Development plan for the period 1970 to 1974, op. cit., p. 110.
The Government has been aware of the operation of the private agencies and their exploitation of jobseekers. The Ministry of Labour has been trying, so far without success, to control or even ban these agencies. The conference on optimum utilisation of employment services held in 1967 felt that fee-charging agencies were "unnecessary in view of the free services offered to workseekers at government employment exchanges" and recommended that the Government should "consider the introduction of licensing appropriate private agencies on the lines of Part III of ... international labour Convention 96".¹ This Convention requires each member State ratifying it to abolish within a limited period of time, determined by the competent authority, all fee-charging employment agencies conducted with a view to profit.² In accordance with this Convention the Ministry of Labour intends to incorporate in the proposed revised Employment Act provision for the licensing of these agencies, to prescribe a maximum fee chargeable by those receiving a licence and to regulate their working. It is high time that these measures were put into operation with a view to the progressive elimination of all profit-making placement agencies. These agencies not only exploit jobseekers but are also said to be a source of malpractices devised with a view, among other things, to hampering the progress of Kenyanisation. They are also largely responsible for the by-passing of free official placement organisations and the consequent disorganisation of the labour market.

THE CENTRAL BUREAU OF EMPLOYMENT

The Select Committee on Employment expressed the view in 1970 that unemployment tended to be disregarded in the course of day-to-day decisions and that a permanent bureau of employment should therefore be established in the Ministry of Labour or elsewhere to—

(a) secure better estimates of the extent of unemployment and better information on its causes;
(b) investigate means of reducing unemployment; and
(c) act as a watch-dog over measures adopted to ensure that the only unemployment remaining was unavoidable.

The functions envisaged for an employment bureau by the Select Committee cannot be performed effectively by the type of organisation contemplated by the Ministry of Labour; in fact it is doubtful whether one separate bureau can undertake all the work. The quantification of the extent and nature of unemployment and underemployment in the country can best be carried out by the statistics division in the Ministry of Finance and Planning through periodic sample surveys of the labour force and unemployment. Not only is this too big and technical a job for any separate organisation to undertake, but also it would mean the unnecessary setting-up of separate statistical machinery when a highly organised and efficient central statistics unit already

² See the Fee-Charging Employment Agencies Convention (Revised), 1949 (No. 96), Article 3.
Labour market policies

exists. The functions of investigating means of reducing unemployment, co-
ordinating various economic policies and acting as a watch-dog to ensure that all involuntary unemployment and underemployment are eliminated cannot be taken on by a small section in the Kenyanisation Bureau or even by a separate office in the Ministry of Labour. What is needed for this purpose is a high-level national manpower board, either in the Office of the President or in the Ministry of Finance and Planning, that has powers to modify policy adopted and direct the carrying-out of the necessary measures by the departments or agencies concerned. What the Ministry of Labour can and should do is to set up a central employment exchange or bureau (as recommended in the second plan), which should—

(a) streamline the functioning of the various agencies of the official employment service;

(b) prepare and prescribe uniform procedures and instructions for the registration and placement of jobseekers;

(c) ensure that the employment service is fully utilised and not by-passed by employers;

(d) ensure that employment service statistics and other employment market data are collected systematically, correctly and on a uniform basis;

(e) analyse employment market information and disseminate "signals" from the employment market regularly and as widely as possible;

(f) act as a clearing-house for notifying unfilled vacancies and distributing all vacancies on a rational basis among the various employment offices in the country;

(g) facilitate the occupational and geographical mobility of labour through appropriate direct or indirect measures; and

(h) co-operate with other government agencies, such as the National Manpower Board, that are concerned with manpower and employment policies and programmes.
AID TO DATE

The purpose of this section is to relate assistance, as measured by the statistics of the Development Assistance Committee, to central government expenditure.

Although the statistics are not sufficiently accurate to allow precise comparisons to be made, the major trends in external assistance are clear from table 123. The flow of total aid was virtually stagnant at about £20 million a year during the period 1964–69, and the level in 1970 and 1971 is likely to be similar. Hence a decreasing proportion of the rapidly rising government budget has been covered by assistance. “External finance in recurrent revenue has virtually disappeared.”

Table 124 shows what aid the Kenyan mid-term appraisal of 1972 felt to be necessary if government expenditure was to rise at the projected rate.

The increase in the volume of aid for which a desire was expressed in the mid-term appraisal is not likely to be available. The quality of aid might, however, improve as a result of the shifts in importance of different donors. Good quality implies mainly a high proportion of grants, favourable loan terms, local and recurrent cost financing, untied aid, and programme and budget support. Such qualities generally affect both employment, which is our main concern here, and the balance of payments, which in turn may be related to employment.

During the 1964–70 period, some 65 per cent of gross external loan disbursements went to debt servicing. In 1971–72 the central Government is expected to spend some £5.6 million on servicing the external debt. In addition, Kenya also has to service privately held external debt, as well as contribute to the servicing of East African Community debts. The grant element of total

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1 Of the Organisation for Economic Co-operation and Development (OECD). The statistics include net disbursements of official financial assistance, but no adjustment for interest payments. The cost to the donors of technical assistance and fellowships are also included.

## Table 123. Foreign aid inflows and government expenditure, 1964–72

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total aid inflows (£ m.):</td>
<td>19.6</td>
<td>25.4</td>
<td>23.5</td>
<td>18.2</td>
<td>20.7</td>
<td>22.4</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Central government expenditure (£ m.):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recurrent</td>
<td>56.9</td>
<td>63.3</td>
<td>68.5</td>
<td>74.4</td>
<td>80.5</td>
<td>91.1</td>
<td>108.6</td>
<td>127.2</td>
</tr>
<tr>
<td>Development</td>
<td>13.6</td>
<td>14.3</td>
<td>16.4</td>
<td>19.6</td>
<td>24.5</td>
<td>30.7</td>
<td>45.5</td>
<td>50.9</td>
</tr>
<tr>
<td>Total</td>
<td>70.5</td>
<td>77.6</td>
<td>84.9</td>
<td>94.0</td>
<td>105.0</td>
<td>121.8</td>
<td>154.1</td>
<td>178.1</td>
</tr>
<tr>
<td>Aid as a percentage of government development expenditure</td>
<td>144.0</td>
<td>178.0</td>
<td>143.0</td>
<td>93.0</td>
<td>84.0</td>
<td>73.0</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Aid as a percentage of total government expenditure</td>
<td>28.0</td>
<td>33.0</td>
<td>28.0</td>
<td>19.0</td>
<td>20.0</td>
<td>18.0</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

n.a. = not available.

Note: the calendar years relate to aid flows and overlapping years to government expenditure.

Sources: OECD Development Assistance Committee; International Bank for Reconstruction and Development: *Economic report, 1972.*

## Table 124. Amount of foreign aid required to allow Kenyan government expenditure to rise at projected rate, 1972–74 (£ millions)

<table>
<thead>
<tr>
<th>Item</th>
<th>1972</th>
<th>1973</th>
<th>1974</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aid available (phased)</td>
<td>22</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Public-sector aid gap</td>
<td>14</td>
<td>36</td>
<td>55</td>
</tr>
<tr>
<td>Total requirement</td>
<td>36</td>
<td>56</td>
<td>65</td>
</tr>
</tbody>
</table>

aid in 1966–69 is estimated at an average of 45 per cent. This is mainly a reflection of the large technical assistance component (41 per cent of total assistance in 1967–68).  

1 In 1969, technical assistance as a percentage of grants was 78 for the United Kingdom, 100 for the United States, 99 for the Federal Republic of Germany, 88 for Sweden, 99 for Canada, 56 for Norway and 77 for Denmark (source: OECD Development Assistance Committee).
International policies

Table 125. Foreign financial assistance by major source, 1964–70
(£ millions)

<table>
<thead>
<tr>
<th>Source</th>
<th>1964</th>
<th>1967</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bilateral</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>8.6</td>
<td>5.2</td>
<td>5.6</td>
</tr>
<tr>
<td>United States</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Federal Republic of Germany</td>
<td>1.4</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Other</td>
<td>—</td>
<td>0.2</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Multilateral</strong></td>
<td>0.2</td>
<td>1.6</td>
<td>3.6</td>
</tr>
</tbody>
</table>


Table 126. Foreign financial assistance and development expenditure, 1964–72
(£ millions)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External loans</strong></td>
<td>8.0</td>
<td>10.7</td>
<td>10.9</td>
<td>18.4</td>
</tr>
<tr>
<td><strong>Grants</strong></td>
<td>4.8</td>
<td>1.0</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total financial aid</strong></td>
<td>12.8</td>
<td>11.7</td>
<td>11.1</td>
<td>18.9</td>
</tr>
<tr>
<td><strong>Total development expenditure</strong></td>
<td>13.6</td>
<td>30.3</td>
<td>45.5</td>
<td>51.5</td>
</tr>
<tr>
<td><strong>Aid as a percentage of expenditure</strong></td>
<td>95</td>
<td>39</td>
<td>24</td>
<td>37</td>
</tr>
</tbody>
</table>

\(^1\) Estimated.


Financial assistance

Table 125 summarises past disbursements by major source of assistance. Although the total volume of disbursement has remained about the same, there has been a significant shift in the composition of aid, with the major donors (particularly the United Kingdom) playing a reduced role and a number of minor and new donors (particularly the Scandinavian countries) becoming relatively more important. There has also been a marked shift towards multilateral aid, mainly from the World Bank Group.

Table 126 shows the level of financial assistance (loans and grants) related to government development expenditure over a number of years.

In the early years after independence, external assistance financed the bulk of the development budget and a significant part of the recurrent budget as well. Since 1967–68, however, there has been a surplus on the Government's recurrent budget, and in 1971–72 external assistance was contributing less than 40 per cent of the development budget. It was recently estimated \(^1\) that aid

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receipts will cover no more than 30 per cent of development expenditure during the three-year period from 1970–71 to 1972–73.

A recent report by the World Bank\(^1\) suggests that disbursements of new aid commitments might reach £165 million over the period 1973–77, or an average of £33 million a year, but that a much longer total flow might be required to support Kenya’s continued development.

The expected importance of financial assistance in relation to total development resources in the case of items of the budget for which financial assistance is large is shown in table 127.

Technical assistance

At the time of independence, Kenya relied on the external world to supply personnel not only to fulfil advisory functions but also to carry out operational duties. As a result, technical assistance has represented a large proportion (about 40 per cent) of the total assistance Kenya has received from external sources. In spite of the various training programmes and in spite of Kenyani- sation, the scale of technical assistance to Kenya has risen rather than fallen, although there has been a shift in emphasis from operational personnel to advisory experts and volunteers.

At mid-1968, there were some 2,700 advisory operational and volunteer personnel in Kenya.\(^2\) By September 1971, the total number had increased to close on 3,000. The composition of this personnel since 1968 is shown in table 128.

In 1968 the major technical assistance suppliers were the United Kingdom, followed by the United Nations and the United States (which accounted for 59 per cent of the total cost incurred by donors). In March 1971, 60 per cent of technical assistance personnel were British, 13 per cent were from the United States and Canada, and 11 per cent were from the Scandinavian countries.

The sectoral allocation of foreign assistance gives the following picture. Of 1967–68 cost to donors, some 33 per cent went to the education sector, 21 per cent to agriculture and livestock, and 9 per cent to health. In September 1971, 49 per cent of foreign personnel were in the education sector, 18 per cent in the agriculture and livestock sector, and 9·5 per cent in the health sector.

In September 1971 there were 1,081 expatriates associated with the Ministry for Education, of whom 750 (mainly British secondary-school teachers) were operational. There were 585 expatriates associated with the Ministry of Agriculture, 216 with the University of Nairobi and 181 with the Ministry of Works.

Employment implications

Past aid has mainly been tied except for that made available by the United Nations Development Programme, the World Bank Group and some smaller bilateral donors. There has been a strong tendency to concentrate on clearly


Table 127. Main sectors of financial assistance, 1970–72 (Rounded figures—£ millions)

<table>
<thead>
<tr>
<th>Sector (budget subhead)</th>
<th>Foreign aid</th>
<th>Matching</th>
<th>Aid as a percentage of total resources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Loans</td>
<td>Grants</td>
<td>Total</td>
</tr>
<tr>
<td>Agriculture and animal husbandry</td>
<td>2.8</td>
<td>0.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Lands</td>
<td>1.2</td>
<td>—</td>
<td>1.2</td>
</tr>
<tr>
<td>Water</td>
<td>0.7</td>
<td>—</td>
<td>0.7</td>
</tr>
<tr>
<td>Education</td>
<td>0.6</td>
<td>—</td>
<td>0.6</td>
</tr>
<tr>
<td>Roads</td>
<td>5.7</td>
<td>—</td>
<td>5.7</td>
</tr>
<tr>
<td>Health</td>
<td>0.8</td>
<td>0.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Others</td>
<td>1.6</td>
<td>0.4</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>13.4</td>
<td>0.6</td>
<td>14.0</td>
</tr>
</tbody>
</table>

1971–72

<table>
<thead>
<tr>
<th>Sector (budget subhead)</th>
<th>Foreign aid</th>
<th>Matching</th>
<th>Aid as a percentage of total resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and animal husbandry</td>
<td>1.9</td>
<td>0.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Lands</td>
<td>0.6</td>
<td>—</td>
<td>0.6</td>
</tr>
<tr>
<td>Water</td>
<td>1.0</td>
<td>—</td>
<td>1.0</td>
</tr>
<tr>
<td>Education</td>
<td>0.4</td>
<td>—</td>
<td>0.4</td>
</tr>
<tr>
<td>Roads</td>
<td>8.8</td>
<td>—</td>
<td>8.8</td>
</tr>
<tr>
<td>Commerce and industry</td>
<td>0.5</td>
<td>—</td>
<td>0.5</td>
</tr>
<tr>
<td>Others</td>
<td>0.6</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>13.8</td>
<td>0.7</td>
<td>14.5</td>
</tr>
</tbody>
</table>


Table 128. Composition of expatriate personnel serving under technical assistance schemes, 1968–71

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory experts</td>
<td>575</td>
<td>548</td>
<td>615</td>
<td>749</td>
</tr>
<tr>
<td>Operational experts</td>
<td>1,572</td>
<td>1,400</td>
<td>1,268</td>
<td>1,351</td>
</tr>
<tr>
<td>Volunteers</td>
<td>583</td>
<td>679</td>
<td>695</td>
<td>804</td>
</tr>
<tr>
<td>Total</td>
<td>2,730</td>
<td>2,600</td>
<td>2,578</td>
<td>2,904</td>
</tr>
</tbody>
</table>

*Estimated figure for most of these under the British Overseas Service Scheme and the British Expatriates Supplementation Scheme (about 1,100) added to figure of 236 other operational experts working in Kenya, March 1970 (secondary-school teachers etc. not included).*

defined and fairly large projects with high "inaugurability", considerable central urban bias, limited concern for distributional and social effects, and preference for little or no local cost financing. Many donors have successfully tried to promote their own exporters and contractors, the consultant device sometimes being a means to this end. Little thought has been given to technological
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aspects, innovatory features and consequently effects on employment. Instead, economic viability and contribution to growth in the traditional sense have been the hallmarks of performance, linked to declared Kenyan policies of a similar nature. There have been exceptions, among which may be mentioned the employment-creating settlement schemes and the tea schemes, and also by and large the Swynnerton plan.

AID UNDER THE DEVELOPMENT PLAN FOR 1970–74

Three sections in the 1970–74 Plan are of special relevance: those on the balance of payments (in the chapter on basic strategy and objectives), technical assistance requirements (in the chapter on employment, manpower and income), and the financing of the Development Plan (in the chapter on targets and finance). The latter two sections are briefly analysed below.

Technical assistance

Peak needs were expected during the earlier part of the Plan. During the subsequent decline, a shift towards experts highly qualified in specific techniques was expected. This category is more difficult to find in donor countries. However, in agriculture and livestock, a need was projected for both high-level skills and junior professional personnel. The Plan also identifies an increased need for technical assistance in vocational and management training.

The Plan does not explicitly relate technical assistance to Kenyanisation policies, but it is not likely that Kenyanisation has yet resulted in any hard screening of technical assistance requests or offers. Because Kenyan preferences seem to be for keeping the machine working smoothly with a wide use of expatriates, an extraordinarily large part of total aid is taken up by technical assistance (41 per cent in 1967–68¹; at present the 1971 figures are estimated at over 30 per cent).

Financial assistance

Here the Plan expresses the need for more explicit and firmer policies. It stresses that softer terms are desirable. Financial assistance should cover the foreign exchange required as a result of (so-called) local cost expenditures on items such as education and rural development, and not be tied to particular goods from particular countries. Donors should change their negative attitude towards local cost financing. Furthermore, recurrent expenditure on education, road maintenance or health may lead to more development (we may add employment) than investments favoured by donors; and should consequently qualify for aid financing.

MID-TERM APPRAISAL OF IMPLEMENTATION OF 1970–74 PLAN

Since the publication of the Plan, the Kenyan Government has been active both in seeking to increase the flow of aid and also in calling upon donors to

adopt more flexible assistance policies, especially in regard to the financing of local and recurrent cost, the untying of aid, and support for wider programmes of development such as the Special Rural Development Programme. The most recent indication of government policy towards aid is contained in the mid-term appraisal of the 1970–74 Plan prepared for the meeting of the Consultative Group for East Africa in April 1972.

The appraisal report is largely conventional in its approach. The foreign payments and government finance gap analysis is along the same lines as the 1972 World Bank report. The appraisal report is accompanied by a detailed list of projects costing at £250 million. The aid sought amounts to £180 million, or 72 per cent of the total. The list is compiled on the basis of assumptions about donors’ preferences \(^1\), and it is also pointed out that delays in the start of individual projects may result from delays in aid commitments. The hope is expressed that donors will react quickly to minimise such delays. The report also reflects a strong belief that Kenyan policy should be adapted to existing aid gaps, in other words to a reduced dependence on aid. In fact, it is stated that government expenditure for 1972–73 must be stabilised at the 1971–72 level because of the foreign exchange problem. Ministries have been instructed to restrict their development proposals to those backed by aid finance or those locally financed that are already under way.

The mid-term appraisal does not directly indicate much in the way of concrete Kenyan policies and desires regarding the quality of assistance. The threat of a quantitative reduction in development appears to blur the qualitative issues. However, the increased tying that has occurred since 1970 is considered most disturbing. It is pointed out that serious imbalances in the structure of the development programme can result from continued tying. A greater proportion of untied assistance is regarded as essential.

As to technical assistance, the mid-term plan appraisal refers once again to the greater need for highly skilled and specialised experts than for all-rounders and administrators.

**DONORS’ PRIORITIES AND EMPLOYMENT**

While some donor-assisted projects in Kenya have made very valuable direct contributions to employment \(^2\), that has not been the aim of external aid as a whole. Three reasons can be suggested for this. First, there has been the general preoccupation in the past with economic growth as the major objective of development, often (but not always) to the detriment of other desiderata. Secondly, until recently the Government had few employment-oriented projects to put to donors, and it has generally been willing to design projects to suit individual donors' requirements. Thirdly, the attitudes of donor agencies, and the restriction imposed on them by their own authorities, have also tended to work against identifying and implementing the projects that would create most employment. The most important restrictions affecting donor operations have been the following—

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\(^1\) Cf. "The list covers only projects in which it is considered donors might be interested", *Economic progress and prospects in Kenya*, op. cit., p. 8.

\(^2\) For example, the “million-acre” settlement programme, and tea production by small-holders.
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(a) those on local cost financing, which have resulted in a preference for capital-intensive projects calling for extensive imports of foreign equipment;

(b) those on procurement, which have again tended to favour capital imports from the developed countries; and

(c) those on programme aid, donors being wary of financing expenditure programmes under which a project is not easily defined, under which their identity as donors is lost or diffused, and under which they have no direct control over or supervision of the implementation of projects.

All these restrictions tend to reduce the effectiveness and usefulness of external aid for the creation of employment.

Some technical assistance has also been of doubtful value from this point of view. Whatever their attitudes, previous experience and special biases, experts are inserted as components in larger systems over which they have little control. The range of policies they are free to propose is limited by their terms of reference, the policies of the agencies that provide them and often by a desire not to come into conflict with vested interests in Kenya or with development trends that are either backed by government policy or accepted through lack of government policy.\(^1\) Massive operational assistance may have prevented or delayed Kenyan participation or involvement or served to centralise policies.\(^2\) The frequent failures of counterpart technique in technical assistance also point in this direction.

In recent years there have been signs that donors are much more concerned that their aid programmes should not only accelerate economic growth but also help to achieve a better distribution of benefits. Most donors now show a preference for financing agricultural, rural development and other programmes designed to increase employment and benefit the poorest sections of the community, and some are anxious to pioneer new programmes with a strong influence on employment. There are also welcome moves, on the part of some donors, to relax restrictions and achieve more flexibility in financing and procurement. There is still a long way to go, however, if external aid is to be fully geared to employment goals—a fact already referred to in our report.

The general trend in government policy has been towards volume, with a reluctance to press qualitative issues at the risk of decreasing volume. The most important aspects of this laissez-faire policy have been the design of programmes and projects according to the assumed or known preferences of donors and a reluctance to launch them until the support of the donors has been secured. The initial phase of donor-recipient interaction in respect of the Special Rural Development Programme is an exception, but Kenyan preferences for budget and then sector support was dropped in the face of donors' resistance. What then remained was a Kenyan insistence on the least possible involvement of the donors in technical assistance at the local levels—for some

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\(^2\) Possible examples include teachers, co-operative executives, architects, etc. (see Chapter 11), family-planning personnel (see Chapter 8), and the Special Rural Development Programme (see Chapter 19).
International policies

donors desired to participate locally—but even this principle was violated. The main reason was probably the feeling that speed and early results were more important than long-term local capacity and suitability as a model for planning the creation of employment from below. The case illustrates the profound influence of donors on new programme and project ideas and institutional reforms and arrangements.

On the other hand, donors have often behaved so as to support, or even advocate, sector priorities and technologies that are less useful in the creation of employment. Another way of putting this is to state that they have helped to create tendencies in Kenya towards perpetuating an unsuitable order of priorities. Donors could also do more to strengthen the co-ordinating role of the Ministry of Finance and Planning in all requests for aid and technical assistance. In certain cases, free foreign exchange and perhaps assistance in recruitment might be preferable to normal tied technical assistance.

Another promising possibility is to channel more aid through such intermediaries as the Industrial and Commercial Development Corporation, the Agricultural Finance Corporation and the National Construction Company for redistribution to smaller individual projects. The many proposals made in the various chapters of the report all have aid and technical assistance implications which we cannot follow up in detail here.
In this paper a brief outline of a rural works programme is given to supplement the section on rural works contained in Chapter 19 of our report. The purpose is to stimulate a debate on the crucial issue of how an adequate rural infrastructure should be constructed and maintained to support the national policy of rural development. The reader should regard this as an outline, in its true sense, of one possible approach among many, and should interpret the assumptions made as being tentative rather than based on firmly verified facts.

Our conception of the role of rural works is indicated in our report, which points to the need for a set of principles and criteria on which rural works should be based. Some of the prerequisites for the planning of rural works are described below.

An important requirement is to choose the right rural works technology. Technology is here conceived in its widest sense to include choice of product as well as of production method. The timing of construction, with due regard to resource constraints, must be considered in close relation to the choice of technology. In fact the inclusion of the time factor is what enables the whole exercise to be called "programming". Obviously more investigation is needed before guidelines on the many issues raised by such programming can be laid down; however, this should not prevent the initiation of some of the programmes, which would provide invaluable experience and data for future programming. The road plans undertaken under the Special Rural Development Programme could be the forerunners of the more integrated approach aimed at in a proper rural works programme.

ORGANISATION AND STAFFING

The present institutional framework under which rural works are being performed seems inadequate, since the various types of works are the responsibility of different ministries, e.g. the Ministry of Works (roads), the Ministry of Agriculture (irrigation and major water development schemes), the Ministry
of Health (minor domestic water supplies), and the Ministry of Labour and Social Services (social welfare and other similar buildings). In order to secure a fully co-ordinated implementation of the plans, we recommend that the construction and to some extent the maintenance of what is built be the responsibility of a single rural works department located in some appropriate place in the structure of government.

We recommend that the rural works department should station a rural works assistant to the district planning officer (or the area co-ordinator) in each district. Whereas it will be the responsibility of the district planning officer to design the rural works programme in general, it will be the responsibility of the rural works assistant to plan the programme in detail and to organise the day-to-day operations.

The rural works assistant should have some training similar to that of a works inspector, as well as a good understanding of the principles on which the planning is based. It is desirable that some college of science and technology should introduce training of this kind. Alternatively, a special college of rural works technology would provide candidates with the necessary qualifications.

At his disposal for the execution of the works the rural works assistant should have the following assistance:

(1) A number of works overseers (preferably grade II) able to organise and supervise large labour forces performing relatively labour-intensive operations. These overseers could be recruited from the National Youth Service, where a special training programme for this purpose could be established. Upon completion of their service, the trainees should attend a course at the Kenya Highway Training Centre which would enable them to pass a test as works overseers.

(2) Groups of school leavers in semi-technical and record-keeping roles. This would be a way to utilise the knowledge acquired by young people in the rural areas and thus give them an incentive to remain near their homes.

(3) Rural works artisans to provide the necessary skill for the performance of more complicated operations. They could be recruited from the village polytechnics.

(4) The existing Ministry of Works organisation to provide technical advice on more complicated matters (bridge design, delicate survey tasks, etc.), accommodation and maintenance for the necessary equipment and the operators, and possibly store-keeping and accounting services. Ideally, of course, the latter services should be entirely within the scope of the proposed rural works department. This, however, may be unrealistic to establish, and the Ministry of Works may be better equipped to tackle the problems that arise.

ESTIMATE FOR 600 WORK UNITS

To be able to make an estimate of the possible size of a rural works programme, and of its costs, employment potential and possible accomplishments in physical terms, many more assumptions have to be made. These are given below, as explicitly as possible.
Rural development and planning

1 The choice of what should be constructed and how is made with as much consideration to available local resources as possible in respect of both materials and manpower. In principle the most labour-intensive products are aimed at. For example, the design principles and specifications for the roads, i.e. feeder roads, are made as simple as possible, and the road width and the earthworks are kept to a minimum.

2 Payment is made on a target work basis. This seems to be the best method for highly labour-intensive works.

3 The year is clearly divided into preparatory, maintenance and construction seasons or periods. The aim is to provide seasonal work during the construction period. The works overseer and his staff of ten permanent workers will spend much of their year preparing for the construction period. These permanent workers will be the backbone of the maintenance organisation.

4 Given these assumptions and given that the permanent workers have a solid understanding of the works schedule, etc., each works overseer (after some years of experience shared with the permanent workers) should be able to manage and occupy 150 unskilled labourers, including local headmen, plus five school leavers and two rural artisans. This sort of manning structure has already been used successfully in East Africa. If there are doubts about the ratios of supervisory staff implied, however, it would obviously be perfectly possible to operate with higher ratios of supervisory staff to general workers.

5 The full labour force is employed for 20 days a month, 3 months a year. One-third of this force is employed for 3 more months per year on minor works and to some extent on maintenance tasks. This is equivalent to 4 months, or 80 days, of "full" employment per year.

6 The average daily wage rate for unskilled labour is 5.25 sh. Three-quarters of the man-days are paid for at the rate of 7 sh. and the rest unpaid (Harambee contribution).

7 The school leavers are paid 6 sh. per day, and the artisans 10 sh. per day.

8 The capital intensity (i.e. expenditure on equipment) per man-day is 4 sh. As a pointer to this crude estimate, figure 4 in Technical Paper 8 has been used.

9 Expenditure on materials per man-day is 2 sh. (simply taken as 50 per cent of the capital expenditure).

10 The seasonal labour force is not provided with accommodation, as it is presumed that the works are undertaken very close to their home area. For the same reason the transport costs to and from the work sites are marginal and considered to be included in the capital intensity figure.

11 Ministry of Works assistance amounts to 2 per cent of the wage bill.

12 This last assumption is critical to the size of the total programme on a country-wide basis. It is assumed that 600 works overseers could be trained over five years. Should this period prove insufficient, the time required to reach the stage of full operation of the programme must be extended.

---

1 A wage rate of 5 sh. per day is commonly regarded as standard payment on odd jobs in agricultural enterprises, etc. The Ministry of Works pays much more on road works—about 200 sh. per month, plus an accommodation allowance if huts are not provided.
Employment, incomes and equality

Costs (in sh.)

Daily direct expenditure per works unit

Wages (157 workers):

- 150 unskilled workers at 5.25 sh. a day: 790
- 5 school leavers at 6 sh. a day: 30
- 2 artisans at 10 sh. a day: 20

Total: 840

Ministry of Works assistance (2 per cent of wage bill): 17

Capital expenditure (4 sh. per man-day): 630

Expenditure on materials (2 sh. per man-day): 315

Total: 1802

The average expenditure per man-day amounts to 11.45 sh. (1,800 ÷ 157). For 600 works units, the total daily direct expenditure would be about 1.08 million sh. (600 × 1,800).

Total annual expenditure

Daily direct expenditure for 80 days a year (80 × 1,080,000): 86,400,000

Recurrent annual expenditure on maintenance and permanent staff:

Per works unit:

- 10 labourers at 240 sh. a month: 28,800
- Equipment and materials: 10,100
- Works overseer (grade II): 6,000

Total: 44,900

Total for 600 units (600 × 45,000): 27,000,000

Total annual expenditure will thus amount to about £5.65 million a year, or £6 million if a 6 per cent margin is allowed for miscellaneous contingencies.
Employment (in man-days)

**Seasonal**

150 unskilled men per unit working 80 days a year (600 units)  
5 school leavers per unit  
2 artisans per unit  

7 200 000  
240 000  
96 000  

7 536 000  

**Permanent**

6 000 maintenance and other permanent workers  
600 works overseers  

1 100 000  
100 000  

1 200 000  

8 736 000

Income (in sh.)

**Seasonal**

40 320 000  

20 880 000

61 200 000

Over-all annual totals

The possible annual expenditure and employment on the main types of rural works projects are shown in table 129. Another 14.4 million sh. should be added for miscellaneous projects such as health centres, cattle dips and irrigation channels from minor dams—making a possible total annual expenditure of 86.4 million sh. However, to the extent that man-days allocated for the structures listed in the table are underestimated, there will be less scope for miscellaneous works.

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1 These it is proposed to distribute as follows:

\[ \frac{1}{3} \times 600 \times 157 = 62,800 \text{ persons employed for } 3 \text{ months} ; \]

\[ \frac{1}{6} \times 600 \times 157 = 31,400 \text{ persons employed for } 6 \text{ months} . \]

Thus a minimum of 94,200 persons would be affected. Particularly in the case of road building it may be expected that a procedure for rotating the labour force employed could be introduced, increasing the possibility for even more persons to obtain some opportunity of earning an income. The number of persons affected could easily rise to 150,000. The practice of rotating the labour force is already used in effect when a road passes over the boundary to another sub-location: a new gang of labourers is taken on from the new location and the old gang paid off. From an engineering management point of view this practice may not be the most efficient, as it always takes some time to train a new gang. On the other hand, the practice ensures that more people have an opportunity of earning an income and acquiring some skill—not to mention enhanced motivation for the maintenance of the road within their own area.

2 The indirect employment induced is almost impossible even to guess, but it would be on the safe side to estimate that the number of man-days of work created through the programme could total 9 million a year (or about 40,000 man-years with an average of 1,250 sh. of income a year).
### Table 129. Possible annual expenditure and employment on main types of rural works projects

<table>
<thead>
<tr>
<th>Projects</th>
<th>Units of work per project</th>
<th>Man-days per project</th>
<th>Man-days allocated</th>
<th>Units of work accomplished</th>
<th>Cost per units of work (sh.)</th>
<th>Total cost, all projects (millions of sh.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor unclassified roads</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor unclassified roads</td>
<td>1 km</td>
<td>785</td>
<td>3 768 000</td>
<td>4 800 km</td>
<td>9 000</td>
<td>43.2</td>
</tr>
<tr>
<td>Minor dams</td>
<td>10 000 m³</td>
<td>10 000</td>
<td>1 256 000</td>
<td>125 dams</td>
<td>115 000</td>
<td>14.4</td>
</tr>
<tr>
<td>Rural piped-water schemes</td>
<td>10 000 m³</td>
<td>7 000</td>
<td>1 256 000</td>
<td>180 schemes</td>
<td>80 000</td>
<td>14.4</td>
</tr>
</tbody>
</table>

1 The cost quoted is based on an average of 5.25 sh. a day for the construction of all three kinds of project.  
2 This is construction cost only—i.e. excluding cost of installations (pumps, pipes, etc.).
TECHNICAL PAPERS

PART III

STATISTICS AND RESEARCH
Many of our recommendations require additional information for their detailed application, and probably also for the testing of their validity. Such information must be provided by research, and research must be based on empirical data, quantitative or statistical wherever possible. Accordingly, we now make some comments on the statistical developments we consider especially important if the research worker is to be able to provide those responsible for policy with this necessary information.

A major change in development policy implies a corresponding change in the output and organisation of an official statistical office. This raises general issues, applying to all developing countries, which we shall consider first. Broadly speaking, the core of most statistical programmes today is a system of national accounts. Such a system was first constructed to quantify the Keynesian model for unemployment in industrial countries, and then adapted, in particular through the production of constant-price series and sector output totals, to meet the increasing concern with economic growth during the 1950s and 1960s.

This accounting system clearly shows the marks of its origins. Its most important indicator is the rate of growth, and growth is implicitly assumed to be caused by the accumulation of fixed capital (and inventories) in accordance with the growth theories of the 1950s, especially the Harrod-Domar model. Thus great emphasis is placed on the definition and measurement of "investment" (or "saving"), which is itself a measure of the resources the country gives up to make provision for the future. This unusual definition of investment, however, is too restrictive for a country like Kenya. There education needs to be looked on not primarily as an element in consumption—with the implication that it gratifies the children (or, vicariously, the parents) in the year of expenditure—but as a provision for the future.

To use statistics means accepting, unconsciously for the great majority of users, the judgments that lie behind them, especially those that have influenced the documentation of one sort of activity and the exclusion of another.

A good example is the informal sector. We have indicated its importance in several chapters, but we have had great difficulty in obtaining any clues at all to its scale and composition. One great hindrance to development is the way
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in which this sector is neglected or even harassed, instead of being helped.\(^1\) This is partly due to a bureaucratic obsession with tidy classifications. Is it not also due to a feeling that the informal sector is a sort of sewer in the economy, collecting all the drop-outs, the shady characters who have failed to make good, and acting as a drag on economic progress, or anyway on modernisation? Is this not due in part to the fact that published economic statistics refer almost exclusively to the output of the organised “enumerated” or formal sector, implying that it has superior social value (even the alcoholic drink, cigarettes and consumer durables bought only by the top 5 per cent of the population)\(^2\)?

Similar points can be raised about subsistence agriculture. One reason for the neglect of this sector may be the paucity of data about it apart from a guess included in the estimates of domestic product. Yet it is the starting point of a socially oriented development plan. The whole treatment of “non-monetary” output in the social accounts reflects an assumption that this type of activity is a sort of excrescence on the body economic, something for which an allowance can be added on (very approximately) after economic activity proper of various kinds has been estimated.\(^3\)

This is a reasonable assumption for statisticians in a developed, industrial economy, where non-marketed output means mainly a little fruit and vegetable production;\(^4\) but it is a very different matter where a large part of all types of activity, not merely farming but also secondary production (milling maize, making clothes, building houses) and tertiary services (hair cutting, laundering, transport, marketing) are carried out either within the family on the basis of simple barter or in other ways not enumerated. Similar problems, which we have mentioned early in our report, arise over defining employment, unemployment and the economically active population. Statistical conventions are bedevilled by the co-existence of organised economic activity, activity that is unorganised but remunerated, and household activity carried on without payment, often all producing the same product.

What is involved, therefore, is not just a switch of emphasis in the collection of data but a change in the conceptual framework. This raises issues too big to be pursued here at length, though it is clear that a great deal of disaggregation is involved.\(^5\) In the Standard Industrial Classification, activities are not always

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\(^1\) See especially Chapters 3 and 13 and Technical Paper 22.

\(^2\) One might equally well (this would also be an error) look on the economy of the capital as the excrescence.

\(^3\) Even in industrial countries, there has been some concern about the boundary between monetary and other activities. It is a well known paradox that if a man marries his housekeeper, the national income falls, even if everything continues exactly as before, and some early estimators (especially in Scandinavia) used to include a national allowance for housewives' services. For similar reasons some African statistical offices have included the price of brides. But the main current of statistical tradition took another direction, reflecting a strong preference for sticking to what was easy to measure. The measures, however, lose in significance: housewives buy more prepared foods as incomes rise, and the measures of growth contain an upward bias as an indication of welfare. The activities of parents, especially mothers, in bringing up children, are possibly as vital an investment as education but they are omitted because they are non-marketed. If children are sent to nursery schools instead, and mothers become teachers in nursery schools, the national income jumps. There are, of course, downward biases too.

\(^4\) It would be ideal if the new framework were so arranged that it was incidentally compatible with the United Nations System of National Accounts, in the technical sense that it

\(^5\) It would be ideal if the new framework were so arranged that it was incidentally compatible with the United Nations System of National Accounts, in the technical sense that it
grouped under functional sectoral groups. For example, the productive sectors such as agriculture include such service functions as retailing, transport and repair and maintenance. Similarly, one often finds the output of various kinds of services included under manufacturing, for example transport operated by and building carried out by a manufacturing unit for internal use. This system classifies output and employment by the criterion of principal activity.

People too are allocated to economic sectors on the basis of their principal activity or occupation. In official statistics, a wage labourer is assumed to be employed full-time on one task. In Kenya, however, the truth in agriculture and much of the services sector is often very different. There are conceptual difficulties because the market mechanism does not play the significant role in allocating resources between industries and occupations or clearly demarcating the boundaries between economically active and inactive population that it plays in the developed countries. The same person may perform several functions such as trading, farming or manufacturing. According to a survey of rural enterprises in Nyeri district, over 57 per cent of 167 owners of enterprises in the retail and wholesale sector had secondary occupations, nearly all in farming. Similarly, 42 per cent of the 226 owners of enterprises in the manufacturing and repair sector also had secondary occupations, again nearly all in farming. Even full-time farmers may work some hours a week in marketed or non-marketed service activities, such as teaching. Unless proper matching is ensured between the data on persons engaged in production and the corresponding output under national accounts (since the two sources of data are different), the measurement of productivity from national accounts data can lead to distorted results. If a value is ascribed to the output of non-marketed services (say subsistence activities) but the employment data do not adequately cover the labour inputs of those who may contribute to this output (such as wives and other members of the family), then the division of the output data by the underestimated man-hours of input would tend to exaggerate productivity.

The feasibility of adapting the conceptual framework of the system of accounting should be investigated without delay. Kenya, having one of the strongest statistical offices in Africa, could well pioneer in this, perhaps with the help of outside advice. If this is accepted, our mission could be followed by a visit from an international expert to advise on its implications for statistical policy.

For an employment policy it is important that data on incomes or compensation should correspond as far as possible to data on employment. As a rough
Employment, incomes and equality

approximation, income from each activity, or the income equivalents of different tasks, should be matched by corresponding labour inputs (in terms of man-hours) in order to assess the relative importance of different activities and their capacity to generate income.

Kenya has made considerable progress already in this respect. Household budget inquiries were carried out some years ago in the big towns and Central Province, and a regular programme is now getting under way, starting with Nyanza and parts of the Rift Valley. A demographic data programme is also to be established with local teams, and a good deal of work has been done on local food production and consumption. If the needs of measuring poverty and throwing light on its causes are kept in the centre of this programme of surveys, a great deal of useful material will be provided on matters about which we have had to make conjectures or use very fragmentary material. Moreover, the monitoring of progress towards targets of the kind suggested in our report requires regular checks to show whose incomes are growing, and who is being left behind, as levels of living rise. This in our view should receive very high priority in the collection of additional data and in any revision that may be undertaken of the existing information system.

The collection of data will need to be supplemented by research in greater depth on the patterns of household consumption and the use of labour, output, incomes and marketing in various parts of the country, if economic policy is to focus properly on the relief of poverty.

We have not had time for a survey of Kenyan statistics. It is therefore difficult to recommend a precise set of priorities for the collection of statistical data. This job could best be done by the international expert whose employment was recommended above. Nevertheless, since the collection and processing of additional statistics involve a heavy cost in funds and skilled manpower, we feel that a higher priority needs to be given in the near future to the collection of statistics necessary for verifying the success of policy. In the light of this criterion, the following tentative proposals, which fit in well with our analysis and recommendations for policy, would need further detailed exploration:

(a) the collection of additional information on household and individual incomes for measuring the progress towards minimum-income targets;

(b) the collection of information on unenumerated small-scale enterprises, especially in manufacturing and services.

A few indications based on our experience as users of statistics for various sectors may now be useful.

AGRICULTURE

Data on agriculture (with the exception of many subsistence activities) are already more plentiful than those on many other economic activities. In our view, they therefore do not require as high a priority as those concerning some other spheres such as small-scale urban activities. It may, however, be useful if the agricultural sample surveys produce more data on incomes, expenditure and other household characteristics and sample a wider range of rural situations.

Changes of method in small-farm surveys, so that they gave additional data on labour inputs by sex and age in relation to household structure,
Statistics and research

would also be desirable. Resources permitting, in the long run it would also be useful to aim at obtaining information on the time women spend on the preparation of food and other non-agricultural tasks.

INDUSTRY AND TECHNOLOGY

Foreign enterprise

Data on capital stock and detailed data on gross investment branch by branch are now lacking. In their absence, no clear indication of factor substitution between labour, skills and capital is possible. A detailed breakdown of data on intermediate inputs is also urgently needed. Comparative data must be published on foreign-owned and locally owned manufacturing enterprises. Although much information is available, it is not easy of access. The 10 per cent sample of the accounts of foreign enterprises 1 might make it possible gradually to build up a picture of the relations between profits, savings, rates of retention of profits, balance-of-payments effects and other factors influencing foreign investment policy.

Domestic enterprise

The data available at present refer mainly to large firms employing over 50 workers. If the recommendation that we make in our report (in accordance with the policy of the Government) to promote self-employment in small enterprises through Kenyanisation and other means is to be implemented seriously, and if progress is to be measured periodically, it is extremely urgent to collect regular statistics covering such matters as value added, average earnings, capital stock, capacity utilisation and employment, for firms occupying from 5 to 10, from 11 to 20 and from 21 to 50 employees or other persons.

The operation of a national tariff and protection policy also requires more information on the relative efficiency of and the costs incurred by different types of firms, or firms in different branches of industry.

Research and development

Surveys on research and development and on engineering manpower and expenditure should be undertaken as soon as possible. They would not be expensive and they would be extremely useful for determining the capacity of the engineering industry to develop domestic designs and specifications for capital goods. Data on research and development expenditures and their rate of growth are important for policy.

Small industries

A census of urban and rural small-scale industry is needed. Some of the data forms must be modified in order to obtain comparable information on

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1 See Chapter 10.
Employment, incomes and equality

employment by status and sex, branches of activity and capital investment. Such a census should both make it possible to judge the efficiency of the labour-intensive small-scale enterprises and indicate promising lines of action.

SERVICES

The special capacity of the services sector to absorb labour is partly due to its greater opportunities for part-time employment. Female and older workers who may not be normally available for regular and full-time work go in for such activities as commerce and personal services requiring less physical strength and offering greater part-time opportunities. Thus, regular annual surveys of services and distribution should not only take account of part-time workers in the total number of persons engaged but also give adequate information on the amount of time worked by part-timers. This type of information is not essential if income data are collected by sources of income and if they identify all types of activity (distinguishing part-time from full-time) that generate income. However, information on the amount of time worked makes it possible to take account of part-timers in full-time equivalents. It also facilitates the inclusion or exclusion of unpaid family workers in figures of employment. For most purposes, part-timers and family workers cannot be given the same weight as full-time workers.

In the statistics available at present, which are based on censuses of distribution and services, separate information is not available on owner-operators, directors and managers (or employers) and unpaid family labour. In order to assess the effect of the Government’s declared policy of promoting self-employment, it is necessary to examine trends in the relative growth of self-employment and wage employment. A finer breakdown of employment by status categories should be possible without much additional cost. In the wholesale and retail trades, although data on employment by occupation is not too important since the skills used are not highly differentiated, it would be useful to distinguish between sales personnel and other employees.

There is also a need for comparative information on small-scale and large-scale operations. In services, particularly distributive trades, small firms predominate. The Government’s policy of accelerating the participation of Kenyans in trade, transport and services is likely to increase the importance of small businesses further. A systematic processing by ownership, capacity and scale of operation of data obtained when licences are issued in retail and wholesale trade and transport would therefore be highly useful as a guide to policy; so would information on the rate of failure in small-scale businesses.

More information is needed on repair and maintenance services, and it should, if possible, be separate for large and small units. Information should cover earnings per worker, the utilisation of capacity, value added, work carried out by the enterprise and sub-contracted work, the periods when transport equipment and tractors are out of action for repair, machine utilisation rates, and the cost of repair and maintenance by age and type of equipment (whether new or second-hand) etc.

Information concerning expenditure on repair and maintenance by type of organisation (including partnerships, individual owners, corporations public and private, and state-owned enterprises) should also indicate whether better
repair and maintenance services could be achieved by changing the existing organisational structure.

EDUCATION

Such statistics as are available are significantly more complete for formal than for informal education, and for maintained than for unassisted institutions. Even the form, content and periodicity of the data differ between them. Published statistics tend to concentrate too narrowly on enrolments, projected enrolments and pupil-teacher ratios, to the neglect of other vital information. For example, the data available on the cost of education are inadequate, and no solid studies seem to exist on the relative costs of education between primary, secondary and higher education, between rural and urban institutions, between comprehensive and general secondary education, between vocational and academic education, or between vocational on-the-job training and the formal vocational education system.

There are virtually no published data in the whole field of training on the effort of private firms and voluntary agencies. A census of all training facilities (both public and private) has been undertaken and its maintenance is highly desirable.

Rates of repetition seem to have been published only for 1970, but discussions with officials suggest that even these are highly suspect and tend to understate the position. It follows that the projected enrolment rates in the development plans, which seem to take no account of repeaters and drop-outs, are misleading. Data on the educational and occupational characteristics of the population, including performance in different subjects, should also become more detailed and comprehensive in order to provide a better basis for manpower forecasts. The same applies to earnings by occupation and education.

CONCLUSION

In conclusion, we cannot but acknowledge that the filling in a period of a few years of all the statistical gaps noted above would be beyond the capacity of any developing country. Our intention is simply to create an awareness of them. Their filling will need a major addition to the present limited manpower and financial resources allocated for statistical work in Kenya. International aid and technical assistance could be usefully directed towards supplementing the existing resources. The international expert whose employment was recommended earlier could establish a detailed set of statistical priorities and examine their implications for the additional resources required.
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