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of Multinational Enterprises

Working Paper No. 28

Multinational enterprises, transfer of
managerial know-how, technology choice
and employment effects:
A case study of Kenya

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Other studies dealing with the above subject are Working Papers Nos. 14, 16, 17, 19, 21, 23, 25 and 27 which are listed in the Annex.
INTRODUCTION

That portion of the development literature which deals with the role of multinationals in less economically developed countries has emphasized a host of institutional and market related forces to explain the performance of such firms. Size of firm, size of market, host government policies, prior experience of the parent firm in the Third World, have all received appreciable attention.

This study takes a rather different approach. Our focus is on the role of the individual decision maker in the subsidiary of the multinational firm operating in a less economically developed country regarding the interrelated issues of training, technology choice and employment generation by the enterprise. In this connection, we have sought for answers to such questions as:

1) To what extent have subsidiaries of multinationals operating in LDC's sought to train indigenous top and middle level managers?

2) Has this training served to produce a cadre of competent and responsible and resourceful managers?

3) What significant decision making responsibilities do the top and middle level managers of subsidiaries of multinationals in less developed countries exercise? Are there any decision making areas which are reserved to the parent company, and if so, which areas? Do the indigenous top and middle level managerial cadre share fully with expatriate managers resident in less developed countries in making decisions?

4) To the extent that local management exercises significant decision making responsibilities, what kinds of decisions have been taken and why? More specifically, what impact have their decisions, in particular those on technology and training, had on the creation of both direct and indirect employment opportunities for host country nationals?

The training and localization of management

Most economists appear convinced that enhanced human know-how is the single most important factor accounting for the growth of total output, per capita and per worker. Of those specifically within the set of human resources which are the most critical for development, perhaps the most serious manpower constraint in less economically developed countries is seen in the general scarcity of entrepreneurial and managerial ability.

In all economic systems, management is a primary active ingredient in the productive process. A country can have endless resources of all sorts but, unless management is applied to the factors, production will be close to zero. Moreover, the better the management, the greater output will be. Managerial effectiveness is the critical factor in the economic system.
With particular reference to less economically developed countries, Pack noted that:

It is generally agreed that if factor prices are correct in LDC's, labour-intensive operations will be adopted, especially in ancillary operations. But there is no deus ex machina at work, translating factor prices into correct choice or technique. Rather, it is a plant manager or director who performs this function. Correct translation of factor prices into production techniques depends critically on their abilities and perception of the world. 3

It is difficult, bordering on the impossible, to select a "typical" less economically developed country in which to study the impact and performance of multinational firms. No attempt will be made to defend the choice of Kenya as a case study by arguing that it is in some sense or other an average African or less developed country. With approximately 22 per cent of its gross national product emanating from the industrial sector, statistically Kenya is representative of Sub-Saharan Africa. Yet, if one looks at the range of industrial-manufacturing operations in Kenya, the country can be seen to be appreciably more economically developed that others of the region, having a highly diversified industrial structure. 4 Also subsidiaries of multinational firms are well represented in Kenyan manufacturing/processing, more so that in most less developed countries having comparable population, market size and per capita income. 5

The literature presents two rather opposing views regarding the role of multinationals in the transfer of managerial know-how. On the one hand it is argued that multinationals are concerned to maintain close control over the operations of their far-flung subsidiaries, especially in countries in which they have limited experience. Therefore, at a minimum, foreign investor firms will always seek to retain an expatriate representative from headquarters in such top level positions as managing director, finance manager and plant manager. As a result, there is bound to be limited indigenous managerial development and even less sharing with locals of meaningful managerial responsibilities. On the other hand, other writers have argued that the cost of maintaining expatriate managers abroad serves as an appreciable drain on the resources of the firm, that expatriate managers often do not comprehend local nuances and thus cannot deal effectively with local politicians and workers. As a result, it is in the interest of the multinationals to develop a cadre of local managers. It has also been pointed out that multinationals have little to fear in training local managers and entrusting them with decision-making responsibilities since managers trained by the multinationals are likely to develop the same 'mind-set' as managers employed in the parent company.
In many ways Kenya actively encourages the transfer of managerial know-how. Non-Kenyan citizens are required to obtain a work permit in order to be employed in Kenya. Such permits are supposed to be made available to non-citizens only where a citizen is not currently available to fill the position. Furthermore, where expatriates are given a work-permit, the Kenyanization of Personnel Bureau requires that firms make provision to train a Kenyan to take over the position of the ex-patriate in a "reasonable amount of time". Table 1 summarizes the progress that has been made in localizing managerial level positions in Kenya since the mid-1960s.


<table>
<thead>
<tr>
<th>Year</th>
<th>Citizen</th>
<th>Non-Citizen</th>
<th>Citizen</th>
<th>Non-Citizen</th>
<th>Total</th>
<th>Citizens as a % of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>883*</td>
<td>3 738**</td>
<td>6 629*</td>
<td>5 459**</td>
<td>16 709</td>
<td>45</td>
</tr>
<tr>
<td>1969</td>
<td>8 589</td>
<td>8 731</td>
<td>8 104</td>
<td>7 930</td>
<td>33 354</td>
<td>50</td>
</tr>
<tr>
<td>1972</td>
<td>9 748</td>
<td>9 913</td>
<td>8 632</td>
<td>2 097</td>
<td>30 390</td>
<td>60</td>
</tr>
<tr>
<td>1977</td>
<td>14 557</td>
<td>6 067</td>
<td>15 612</td>
<td>2 517</td>
<td>38 753</td>
<td>78</td>
</tr>
</tbody>
</table>


* Africans only.
** Non-Africans. Most non-citizens in 1964 were Africans. By 1969 many of the previously recorded non-citizens had opted for citizenship.

It is obvious from the table that significant progress has been made in localizing higher level occupations. But the replacement of ex-patriates with local personnel given the title of manager does not reveal the extent to which local managers have been trained and have been given the authority to implement managerial level decisions. In other words, the
extent to which localization is synonymous with the transfer of managerial know-how and managerial responsibility or alternatively may serve as a euphemism for window dressing is still to be determined.

More recently the Government has introduced a training levy scheme which requires every firm to pay a stated amount into the fund determined by the number of their employees. Firms can then draw a rebate out of the fund if they expend money on what Government considers to be qualified training of their employees.

From all appearances, Kenya is well endowed with a wide variety of public and private training facilities for managers. Among the training institutions found in Kenya are the following:

- University of Nairobi;
- International University;
- Kenya Institute of Administration;
- Kenya Institute of Management;
- Kenya Polytechnic;
- Mombasa Polytechnic;
- Mombasa Technical Training Institute;
- Peter N. Pierce & Company (TACK Training);
- Hawkins & Associates;
- KAKA Advisory Services;
- Apex Management Consultants.

In addition, one or more trainers from such prestigious institutions as the Harvard Business School and Stanford University may, from time to time, appear in Nairobi and Mombasa providing training sessions for managers.

Data base

To ascertain precisely what in the way of training subsidiaries of multinational firms in Kenya have been providing for their local managerial cadre and to try to answer some of the other questions referred to in the introduction to this study, interviews were held with the managing directors/general managers of twenty subsidiaries. The twenty firms chosen for study (list shown in Appendix I) provide a broad coverage of Kenya’s manufacturing/processing activities; fifteen 4-digit ISIC categories are included. They are almost evenly split between firms using high and lower level technologies in production. The vast majority of the firms interviewed are among the largest in their respective sectors, using employment as the criterion for size. All of the firms have maintained productive facilities in Kenya for an appreciable amount of time.
In addition to interviewing the top corporate officer of each subsidiary, interviews were held with 43 top and middle level Kenyan managers currently employed by these firms. The reason for restricting our interviews to local managers with top or middle level managerial titles was to minimize the possibility of encountering 'window-dressing', i.e. spending time interviewing a person who was a manager in name but who did not in reality exercise managerial level responsibilities. In all cases, managing directors were asked to provide a listing of all of their Kenyan managers by title and level of managerial responsibility. Working from such a listing, interviews were requested with designated local managers. The vast majority of managers interviewed are engaged in the financial, marketing and production activities of their firms.

In order to assure ourselves that the Kenyan managers being interviewed were indeed top or middle level managers, the managing director of each firm was asked to provide a company organization chart or to otherwise identify those individuals whom he considered to be high and middle level managers. These designations were checked against self-appraisals made by local managers in the course of the interviews. Also, the self-identification of a high or middle level manager was checked against responses obtained in interviews which required individuals to describe their managerial responsibilities in some detail.

In addition to answering a variety of questions about current jobs, each respondent was asked to provide a detailed employment history starting with the first full-time job. This history required information about management responsibilities exercised with each employer and training obtained from each employer.

Background and training

The twenty firms of the sample currently employ 362 managers, 83 per cent of whom are Kenyans. Three of the firms have Kenyan managing directors. While these three firms have Government of Kenya participation, six other firms in partnership with the Government have an expatriate chief executive. Only five of the top financial positions and five of the top production positions in the firms are currently being filled by ex-patriates. Seven firms do not plan to localize the managing director's position and four firms plan to retain an ex-patriate in both the top finance and managing director's positions. One firm will keep an ex-patriate only as the plant manager.
The 43 Kenyan managers interviewed have been employed for an average of 16 years, none being employed for less than five nor more than 42 years. Difference in length of service between high and middle level managers is slight, the former having been employed, on average, for 17 years while middle level managers have worked for an average of 15½ years.

Twenty-two, or fifty-two per cent, of the local managers had graduated from a college or university before accepting their first job. Five had completed "A" levels (six years of High School) and seven had completed "O" levels (four years of High School). Those who were now top and middle level managers and who had not completed High School prior to starting their employment careers have been working, as might be expected, for an appreciably longer time, 25 years on average, than the average for all top and middle level managers.

An attempt has been made to quantify the training obtained by Kenyan managers. The scheme we have devised is as follows:

- A full work-year of training was assumed to consist of 40 weeks;

- A full school-year of training was assumed to consist of 30 weeks.11

A month of "on-the-job" training was assumed to be the equivalent of one week of training since we assumed it was very unlikely that a supervisor or senior manager providing such training would be able to spend more than a small part of each day involved in training per se.12

Pre-employment training

Twenty of the managers had obtained training that might help them during their professional careers prior to taking their first jobs. These twenty managers had obtained an average of 71 weeks of technical training, mainly in such fields as engineering, chemistry and accounting. In addition, seven of these managers had also had an average of 22 weeks of management course work.13

The lack of formal education completed prior to employment does not appear to have operated as a barrier into the ranks of high level management. There are just about as many top level managers and middle level managers with less than a college level education as there are individuals who held a 1st or 2nd University degree.14
Post-employment training

All of the managing directors stated that their firms were actively providing training for local managers though the seriousness with which such training was being undertaken is questionable. Only four of the firms employ a training officer or personnel manager who is responsible for training managers or for developing a management training programme. Few firms elicit the input of the individual concerned in deciding what training may be needed. In many firms, management training appears to be offered at the whim of the managing director or a department head. Local training facilities were often utilized in response to an advertisement brought to the attention of the managing director. In no case did a firm have a policy of regarding a person for mastering a new management or technical skill. One managing director stated that sending local managers overseas on training assignments was actually a "perk" for good performance and was not a serious training exercise. Yet, he continued to send people abroad letting them believe they were being sent for training. Another respondent noted that local training facilities were almost useless because of the poor quality of their staff. Yet he persisted in sending his local managers to seminars and courses offered by these very same institutions.

All of the firms provide on-the-job training for local managers, three of them providing only this kind of training. Eleven of the firms use a combination of on-the-job, overseas, local schooling and other local training facilities to help develop a cadre of local managers. The other six firms are equally split between those combining on-the-job with overseas training and those using on-the-job and local training facilities. All the firms pay tuition costs for courses of study completed successfully which are undertaken on the employees own time, i.e., correspondence courses in accounting, evening courses in management, etc., and which may contribute to the employees functioning as a manager.
Table 2: Distribution of time spent being trained by employers (per cent of total time devoted to training)

<table>
<thead>
<tr>
<th></th>
<th>Technical Training</th>
<th>Management Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local on-the-job</td>
<td>13.7</td>
<td>30.1</td>
</tr>
<tr>
<td>Local schooling</td>
<td>13.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Overseas on-the-job</td>
<td>5.3</td>
<td>8.1</td>
</tr>
<tr>
<td>Overseas schooling</td>
<td>12.9</td>
<td>3.3</td>
</tr>
<tr>
<td>Other(^a)</td>
<td>1.9</td>
<td>6.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>47.1</td>
<td>52.9</td>
</tr>
</tbody>
</table>

Source: Career profiles obtained from 43 top and middle level managers employed by 20 subsidiaries of multinational firms in Kenya.

\(^a\) Includes seminars and very short specialised courses held at the Kenya Institute of Administration and such private training organisations as the Kenya Institute of Management, Ashby Inbucon, Apex Management Consultants, etc.

It would appear as though very little time was spent in an appropriate setting, i.e. in the head office of a parent firm or some other branch office located overseas. This is not meant to imply that all other training, that taken on-the-job or at school in the host country, is necessarily relevant to the current stage of development in which the host country finds itself.

It is difficult to discern what if any difference the composition of training and the attention paid by firms to management training has made. What we have found is that those firms which only provide on-the-job training have experienced higher than average turn-over rates among their managers than is true of all firms. This may be due to dissatisfaction among their managers with the training being provided. But we found that among firms maintaining training officers and having well developed programmes for training managers they also experienced higher than average turn over rates. Here though it is likely that having devoted an appreciable amount of time and money to management training, such firms are much more demanding in what they expect from their managers. Accordingly, the managerial drop-out rate may be higher in such firms.
The career profiles obtained from each local manager permits us to calculate how much training each manager has received during the course of his work life where, in terms of firms and industries, that training was obtained and of what that training consisted.

Almost half of our managers began their work careers in the public sector (46.5 per cent) while only five of the managers had spent time working for private non-multinational firms. All five of these managers moved into private non-multinational firms after obtaining some training. Two of the five left multinational employment to operate their own firms before returning to multinational employment.

The small number of managers moving from multinationals to other private firms and the fact that none of the managers had moved from multinationals to the public sector suggests that the management training provided by subsidiaries of multinationals in Kenya has had a rather minimal direct impact on the managerial performance of the broader economy.16

Training obtained by managers while employed in the public sector made a very significant contribution to the total management training of the 43 top and middle level managers currently employed in subsidiaries of multinationals. While only 27 per cent of the employment time of managers was spent in the public sector, 37 per cent of all training and 39 per cent of all management training was provided by public sector firms.17 And, according to our respondents, this training was transferable, i.e. was found to be relevant and useful in subsequent employment.

There is an appreciable difference in the composition of training provided by public sector firms and subsidiaries of multinationals operating in Kenya.
Table 3: Composition of training for top and middle level managers, public sector and subsidiaries of multinationals (in per cent).

<table>
<thead>
<tr>
<th>Total training</th>
<th>Management training</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Sector</td>
<td>Multi-nationals</td>
</tr>
<tr>
<td>On-the-job</td>
<td>38</td>
</tr>
<tr>
<td>Local</td>
<td>20</td>
</tr>
<tr>
<td>Overseas</td>
<td>42</td>
</tr>
</tbody>
</table>

Source: Calculated from career profiles obtained from 43 top and middle level managers currently employed by subsidiaries of multinational firms in Kenya (for list see Appendix I).

In training its managerial cadre, multinationals placed much greater emphasis on on-the-job and other local training and appreciably less emphasis on overseas training. Since overseas training tends to be much more costly, this difference in the composition of training may be explained by the multinationals being more "budget conscious" than public sector firms. If it is true, as has been suggested in some of the literature, that foreign firms are concerned to develop local managers who have a "mind-set" similar to that of parent company managers, assuming that local managers will exercise significant decision making responsibilities, then we might have expected to find subsidiaries of multinationals placing much greater emphasis on sending local managers overseas where they might imbibe more of the parent company's values. This, according to our data, does not seem to have been the case with these 43 top and middle level managers. On the other hand, since a significant number of the managers had already spent an appreciable amount of time training overseas prior to joining the subsidiaries of multinationals, the "imbibing process" may have already occurred and they may have been less felt need on the part of the foreign firms to send the managers for overseas training.

Managerial quality

It is most difficult to measure or otherwise define how good individual managers or the management of a firm really is. Here we content ourselves by relating the comments made by managing directors and by individual local managers about the performance of their subordinates. Each manager was asked how many managers were there to whom he
delegated responsibilities and to evaluate the performance of all managers who reported to him. Since only the most often repeated comments are presented here, some attention, we think, ought to be paid to these remarks.

The managing directors of our firms were unanimous in their appraisal of the technical skills of the Kenyan managers. The comment most often made was that the Kenyan managers, technically, were as good as any they had met and worked with in less economically developed countries and were probably on a par with managers in economically developed countries.

The vast majority of managing directors and local managers were, however, also in agreement in noting that most Kenyan managers lacked initiative and appeared to be unwilling to delegate responsibilities.

These findings are neither new nor unique to Kenyan managers. In a paper by Moses Kiggundu, he found the same observations being made of Nigerian managers. Kiggundu relates attitudinal and behavioural deficiencies to the composition of the training given to local managers. He argues that training time spent in cognitive learning processes, such as at lectures, seminars, and on-the-job where the trainer plays the role of authority figure merely reinforces the trainee's dependency and subordinacy. What local trainees require, according to Kiggundu, is more sensitivity training. While not certain how far we might take this critique of the existing composition of training need to focus on sensitivity training as Kiggundu suggests, it is clear to us that much greater involvement of trainees is needed in defining their own weaknesses and in structuring their own training programmes than is currently the case in most firms. Also, there is a need to provide a system of rewards which are directly tied to managerial improvements in attitudinal and behavioural areas.

The role of local management in decision making technology and employment

What freedom of action do managers in subsidiaries of multinational firms operating in less economically developed countries exercise in matters having to do with the choice of technology? Many studies which have dealt with this question have found that there exists very limited freedom of action on the part of subsidiaries over the choice of how a product is to be produced, i.e., whether relatively more labour or more capital will be utilized. At best, according to these studies, subsidiaries can only modify the basic technology package supplied by the parent firm, i.e., reducing the scale of production to fit the size of the host country market. However, other
studies refer at least to a certain adaptation of technology choice to factor proportions in developing countries and point to the complexity of technological choice decisions in multinational subsidiaries and objective complaints (product mix, markets, availability or not of technological alternatives). 19

In order to generate data which might allow us to define the locus of decision making regarding the choice of technology in Kenya as well as other matters relating to technology, we put the following questions to our managers:

- Who is responsible for making decisions regarding
  a) whether locally produced or imported machinery should be used in production?
  b) whether locally produced or imported materials should be used?
  c) how much capital and how much labour to use in production?
  d) whether parent company quality standards should be adjusted?

- Are you currently producing products using a more or less labour intensive operation than is used in the parent firm? If yes, what accounts for this difference?

- What per cent of your total non-labour inputs are purchased locally?

Our findings from the Kenyan case cast doubt on a number of general statements which have appeared in the literature and which are part of the conventional wisdom. While we found it true that parent firms are involved in making decisions regarding technology, our study did not confirm that the parent necessarily determines this technology nor that, when confronted with poorly trained local labour, such as is found in less economically developed countries as Kenya, that the technology employed is more, rather than less, capital intensive.

According to the respondents to our survey, local managers in the subsidiary in Kenya are responsible for making decisions regarding the purchase of machinery and materials in thirteen of the firms while the parent firm, operating through their central purchasing units, make these decisions in the other seven firms. 20 The decision when to replace parts of existing machines and where to purchase those parts, is made in almost all cases by the local management of the multinational.
Most decisions regarding where to purchase machinery, parts and raw materials have favoured imports. This is due, in part, to the control exercised by the parent firm over the setting of quality standards for the products being produced by the subsidiary and in part to the lack of domestically available capital and materials inputs.

In just about every case, the policy followed, often established by the parent firm, is to maximize the use of locally made capital, parts and materials as long as the finished product meets parent defined quality standards. What this actually means is that if the local decision maker learns of the existence of a local producer of relevant machinery, parts or materials, he is free to utilize the local product. But in no case did we find firms undertaking to assist in the development of local suppliers. Most managing directors stated that this was not a proper concern for their firms or that the very small size of the local market did not warrant such an involvement by their company. Furthermore, only three firms have R & D facilities in Kenya which are being used to help develop local materials as production inputs. This, as Pack suggests, may be due to the fact that material costs constitute such a very large part of company total costs.

Because we were told by every managing director, top and middle level manager to whom we put the question, that with rare exception, local sources for machinery, parts and/or materials either did not exist or were of such inferior quality as to be unacceptable, we accept that our respondents truly believe this to be the case. But this is not to say that machinery making facilities, parts making facilities and other inputs are indeed not to be found in Kenya. For example, a recent study of Kenyan foundries and metal engineering firms revealed that these industries currently have the physical and technical capacity and labour force to produce machines and parts currently being imported. This is particularly true of the Kenya railways' workshop and foundry which operates with a capacity utilization of under 30 per cent. Apparently, the manufacturing/processing sectors are not sufficiently aware of these local capabilities.

It would also appear that the Government of Kenya does relatively little to actively encourage the use of local resources in production and thus maximize local value added in the manufacturing/processing sectors. The Kenya Bureau of Standards, established in July of 1974 to promote the standardization and specification of manufactured commodities, generally accepts, with little or no modification, the quality standards employed in the most economically developed countries. For example, although sugar is a major Kenyan product, pharmaceutical firms import rather than use local sugar. Their explanation for this is that locally produced sugar is not as white and refined as their international quality standards require. Yet in India, these same firms use locally produced sugar which is no different from that available in Kenya. The
same situation holds with regard to the utilization of local glass making facilities. Glass is imported for making lightbulbs in Kenya because the local product does not meet the quality standards of the multinational producer. But in India, local glass which is not very different from what is available in Kenya, is used by the same multinational firm because the Indian market warrants making adjustments in quality standards. In other words, market power and political will, not simply international standards of quality, influence considerably the use of local inputs in production.26

While most of the available literature would lead us to expect to find subsidiaries of multinationals in less economically developed countries utilizing capital intensive technologies which are very similar to what is to be found in parent firms, our survey leads to a different result.27

As a matter of fact all of our sample firms are appreciably more labour intensive than their parent firms. Interestingly enough, this was true of the subsidiaries in which decisions on how to combine capital in production was made by the parent as well as in the firms where this decision was made locally.28

The difference in labour intensity between host and parent company operation ranged from twenty per cent to six hundred per cent with the average being the firm utilizing three to four times as much labour as is found in the parent company.29 Given the differences in labour intensity of the subsidiaries in Kenya and their home operations, it is not likely that this difference is due simply to the use of more labour in peripheral activities such as packaging and handling.30

Furthermore, the capital equipment used in Kenya is often quite different from what is found in the parent firm. In just about every firm, the equipment used was less automated in Kenya that in Europe and America. This may in part be explained by the fact that the subsidiaries reported that their machinery was obtained from the parent firm and was twenty or more years old.

A major reason given for the use of much less automated and more labour intensive methods of production by managing directors and other managers responsible for making production decisions is that automated sophisticated equipment such as is found in economically advanced countries requires much greater maintenance and operational knowledge on the part of workers from what is available in less economically developed countries such as Kenya.31 This, of course, contradicts the findings obtained by other
investigators that there is a tendency on the part of subsidiaries of multinationals to import more ready made, i.e., more capital intensive, technologies where the training level of the workforce is low.\textsuperscript{92} Generally speaking, however, it seems very reasonable to expect to find less automated sophisticated capital which is more labour intensive being used in countries which lack the ability to operate or service more sophisticated equipment. The alternative position involves assuming that automated sophisticated capital is synonymous with simplicity of use and servicing.

Other explanations given to us for the use of more labour intensive methods of production in our sample enterprises include references to market size, concern to operate in accordance with host government interests and relative costs.\textsuperscript{93}

However, nothing in our findings suggests that the subsidiaries of multinationals utilize the most labour intensive methods of production available, only that the technologies being used in Kenya are more labour intensive than what these firms employ in economically developed markets.

In 1982 the twenty sample firms of our survey employed 8,119 workers, an increase of 13 per cent over the size of their labour force in 1978. Our respondents were unanimous in attributing that change in employment to market demand for their products. When asked if changes in technology or productivity were of any consequence in their employment experiences, the responses were, without exception, negative.

Managing directors were also asked what, if any, impact a more educated or better trained labour force might have on their employment policies. Their response was that such improvements would either make no difference or that this would induce them to reduce the size of their labour force, with the majority opting for a reduction. Many of the managing directors volunteered that a better educated labour force would encourage them to employ more sophisticated, capital intensive machinery.\textsuperscript{94}

An attempt was also made by us to assess the indirect impact the multinationals have had on employment over the past five years.\textsuperscript{95} The managers were asked how much employment they generated via subcontracting, local purchasing, retailing, etc. Also, as a way of obtaining a numerical estimate of their indirect impact on employment, they were asked how many people not directly employed by them might be left unemployed if their firm were to shut down while their competitors remained in operation but with imports declining by the volume of what they currently purchased abroad.
Only seven firms reported that they utilized sub-contractors to obtain locally made machinery, parts and/or material inputs. Such purchases included raw materials and packaging. The estimated number of workers who were employed producing such inputs was 19,830 in 1982. This number had increased somewhat over the 1978-82 period as firms began to find it more difficult to obtain import licenses and foreign exchange allotments from the Government of Kenya.

Five managing directors, three of whom also made use of local subcontractors, stated that if their firms were to shut down, 14,700 retail and transport employees would be left unemployed. But two of these firms, accounting for 30 per cent of this employment, produce a product for which an imperfect substitute is currently being produced in Kenya, i.e., re-treads as compared to new tyres.

Finally, one managing director offered the opinion that 250 employees might find themselves unemployed if his firm were to suddenly go out of business because a number of firms made significant use of his products as inputs in their own production.

Taking the necessarily incomplete information we obtained, the twenty subsidiaries provided for some 34,800 jobs indirectly and 8,119 jobs directly, a ratio of 4.3 : 1 indirect jobs for every employee directly employed by a subsidiary of a multinational. If we adjust the indirect employment estimates so that realistic alternative employment is not ruled out, then the ratio of indirect to directly generated employment can be assumed to be 3.7 : 1 approximately.

Conclusions

1. Subsidiaries of multinationals in Kenya provide appreciable training for local managers but also rely, to a significant degree, on the managerial training provided by the public sector.

2. Management at the subsidiary, both ex-patriates and indigenous managers, exercise appreciable decision making autonomy over such matters as sourcing of capital and inputs and production technologies, i.e., whether to employ more labour or more capital intensive methods of production.

3. Local managers have, however, almost no influence on the quality of product being produced by their firms, this decision being made at the parent firm headquarters. In reaching decisions on quality standards, the multinational relates to its global interests and not to what may be appropriate for individual countries in which the firm operates.

4. As a partial result of the above, very little in the way of local value added is being generated in such less economically developed countries as Kenya.
5. Government policies do not encourage enterprises to maximize local value added.

6. Because of very appreciable difference in market size and, to a much lesser degree because of differences in factor cost, subsidiaries of multinationals in Kenya may be using technologies which are quite different from what is found in their parent headquarters and is appreciably more labour intensive than what is to be found in their more economically developed markets.

7. Subsidiaries of multinationals, while not opposed to utilizing local sources for capital and materials inputs, neither seek out local suppliers nor do they contribute to the development of local sourcing either because local managers are ignorant of what might be obtained or generated locally or because such activity is not considered by them to fall within their normal terms of reference.

8. There appears to be a lack of information in Kenya, both within government and among the multinationals, of the productive capacity of local firms and the availability of more labour intensive and local resource using technologies than what is currently being utilized in Kenya.

9. Changes in employment to date are almost entirely due to changes in market demand rather than to changes in technology or know-how on the part of employees (i.e. productivity).

10. Significant improvements in worker education and know-how, given existing levels of market demand, would result (ceteris paribus) in the gradual replacement of more labour intensive by more capital intensive technologies with a consequent reduction in direct employment. Its indirect employment effects could need further study.
Footnotes

1 More specifically, by significant areas of managerial decision making when referring to the "choice of basic technology packages" we have in mind in particular the sourcing of both capital and raw materials inputs, specification of capital/labour ratios in production, size of labour force and its evolution over time, setting of product quality standards, use of local subcontractors in production, establishing training programmes, hiring and firing of personnel (etc.).


5 Kenya ranks among the top 40 developing countries receiving foreign direct investment. In sub-Saharan Africa, Kenya is one of the seven largest recipients of foreign direct investment. ILO: Employment effects of multinational enterprises in developing countries (Geneva, ILO, 1981), p.viii.

6 Established in 1967, the primary responsibilities of the Bureau are to operate as a clearing house between employers, to process applications for entry permits for non-citizens in order to ensure that competent citizens are given preference in jobs whenever openings occur. As an operating policy the Bureau does not insist that certain senior level positions in foreign owned/controlled firms, such as managing director and financial director, be localized. This is done, supposedly, to encourage foreign firms to locate and maintain operating facilities in Kenya.
7 Of course the mere presence of training facilities does not imply anything about the quality of the training being offered.

8 For an estimate of the distribution of foreign direct investment in Kenya's manufacturing sector, see Kaplinsky: Employment effects ..., op.cit. With the possible exceptions of canning and processing fruits and vegetables, bakery products, textiles and footwear, paper and paper products, all of the major manufacturing sectors in which subsidiaries of multinational firms are to be found in Kenya are covered.


10 In all cases, managing directors were most cooperative in providing on-the-job time for interviews to be held. In no case was a managing director or his representative present at the interviews.

11 For example, one course in Management Principles taken at the University of Nairobi during a three-year degree programme was counted as the equivalent of ten weeks of Management Training.

12 To be considered as having received on-the-job training the trainee must have been in close personal contact with a trainer-supervisor and must have been made aware of precisely what skills he was meant to learn.

13 No statistical relationship could be found between level of formal education completed prior to employment, prior to employment training, years of work experience, length of time employed by one's current employer and current level of management. If indeed more formally educated individuals were initially employed in higher level positions, their less formally educated brethren soon caught up with them. Also, those currently holding middle level managerial positions had slightly more formal education, pre-employment training and job experience than the managers in top level positions.

14 A few of the managers had obtained master's level degrees prior to beginning work.

15 Nothing in the way of technology, years in Kenya, localization policies, parent nationality, private-public partnership, serves to distinguish these firms from the others.
16 The direct impact of management training by multinationals may have been greater than our data indicates since we do not know where those managers who left multinationals to accept other employment may have gone. Seventy-four managers left the twenty multinationals in our study over the past five years. Within the public sector multinationals group there was appreciable managerial mobility. While ten of the managers remained with the firm in which they began, our average manager had worked for 2.77 firms, in 2.42 industries and had held 5.86 different jobs during his work career.

17 Public sector firms provided 6.4 weeks of training per year employed while subsidiaries of multinationals provided 4 weeks of training per year employed for the 43 managers.


19 See in this connection the literature review in L. Marsh, R. Newfarmer, L. Moreira: Employment and technological choice of multinational enterprises in developing countries (A literature review and a case study), Multinational Enterprises Programme, Working Paper No. 23 (Geneva, IL0, 1983).

20 Five of the seven firms reporting parental control over the purchase of machinery, parts and materials are high technology firms. Eight of the firms in which local, mainly Kenyan, managers make these decisions also employ high technologies.

21 For the twenty firms, imports account for an average of seventy seven per cent of total non-labour costs of production. In only two firms do imports account for less than sixty per cent of total non-labour costs.

22 According to our study, the single factor over which parent firms exercise most direct control is the quality standard of the product being produced. Sixteen of the firms reported that they had no role in defining quality standards. In three of the remaining four companies, standards might be adjusted with the permission of the parent firm and in one company, standards were established locally because this was the only firm producing its particular line of products which was owned by the parent multinational.
23 Since about 1977 Kenya has had an Industrial Research and Development Institute. It is supposed to engage in basic research and work on contract for private and public firms. As far as we could determine, this Institute has, to date, been moribund. But if it can be activated, by requiring that firms provide documentary evidence proving that they have made real efforts to obtain their required machinery, parts and raw materials locally and that they have sought to develop local sourcing through the Institute before the Government agrees to issuing import licenses and make foreign exchange available, much might be accomplished to enhance local value added.


25 Peter E. Coughlin: Converting crisis to boom for Kenyan foundaries and metal engineering industries, University of Nairobi, Department of Economics (January, 1983). According to Coughlin, existing government policies seriously constrain these industries. Among the policies and laws which he identifies as restraining these industries is the law which recognizes all patents registered in England. As a result, Kenya must pay royalties or licensing fees to produce patented items, even when the designs are simple and sufficient technical capacity exists to produce these items in Kenya without dependence on foreign "know-how".

26 This is rather different from what is found in Brazil where imported technology pre-determined the subsidiaries suppliers. In fact, the current foreign exchange crunch in Kenya is starting to have the desired effect of forcing producers to seek out local supplies of materials and parts. The recently re-established export incentive scheme, requiring that only 50 per cent of the export items value be locally derived and that imported capital can be counted towards this local import content, does little to encourage the development of local sourcing.

27. Explanations for this include the following:

Multinational corporations face different factor prices from firms in developing countries which results in their choice of technology reflecting their ability to draw upon the world capital markets (where interest rates are generally lower and where the social cost of capital is lower than in the developing countries). Thus, this leads the multinational firm to reproduce the technological choices made in the industrialized advanced countries. As a result we find a significant bias towards capital intensity in the technology transferred to affiliates of multinationals in developing countries. The scope for efficient substitution of labour for capital in manufacturing processes depends on the specific product being produced. In continuous process industries (chemicals, pharmaceuticals, metal refining) and in the production of many consumer's goods and intermediate goods on an assembly line the scope for such substitution is quite limited, except in certain ancillary operations, particularly materials handling and packaging. See "The multinational corporations in Africa", in: Africa Contemporary Record Current Affairs Series (London, Rex Collings Ltd., 1972), p.17.

Multinational corporations tend to make their production technology decisions on a global rather than country specific basis. As a result, the technology found in subsidiaries in less economically developed countries are as capital intensive as that found in the parent firm. See ILO: Employment effects of multinational enterprises in developing countries (Geneva, 1981), p.100.

Foreign companies prefer familiar situations and this will lead the foreign company to prefer a capital-intensive operation to the employment of large number of local workers. See Hans W. Singer: "The foreign company as an exporter of technology" in Bulletin of the Institute of Development Studies, Vol. 9, No. 1 (October, 1970), p.11.

28. Fifteen of the firms reported local control over decisions regarding the choice of K/L ratios.

29. This is consistent, for instance, with the finding reported by Morley and Smith for 35 MNE subsidiaries in Brazil. ILO: Employment effects ... op.cit., p.99.
In responding to the question of the utilization of labour and capital, interviewees were asked to consider only full time employees. In response to another question we learned that most firms employed casual labour to handle such peripheral jobs as packaging and handling.


Eight firms mentioned relative costs as one of the factors that influenced their decision to employ a more labour intensive method of production. Since labour costs only account for about 8 per cent of the total cost of all large size (50 or more employees) manufacturing firms in Kenya and 10 per cent of all costs of small firms (20-49 employees) it is highly unlikely that labour cost is a critical variable in technology decisions. Available data does not permit computing labour costs as a per cent of total costs directly. Data supplied by the Government of Kenya in the Statistical Abstract permits calculating a range over which the significance of labour costs in production in the manufacturing/processing sector may be calculated. This publication provides data for labour costs which includes salaries and wages plus such other labour payments as housing allowances, social security payments and the like. Total costs of production are not presented as such but output costs which include profits before taxes are available as are the costs of inputs which exclude interest and depreciation charges. Thus, we can derive two measures of the significance of labour costs in production, one being labour costs as a per cent of output costs which, since the denominator includes profits, provides us with a somewhat under-estimate of the significance of labour costs in production and labour costs as a per cent of input costs which provides for an over-estimate of the significance of labour costs since the denominator in this case excludes both interest and depreciation charges. Fortunately, the two measures computed for 1980 are (see Appendix 2 for some of these calculations) quite close.

Most managers reported that there had been some improvement in the level of education of their labour force and/or that they had raised their minimal education requirements for new employees over the past five years. But while this upgrading was taking place, changes in market demand were such that the net effect was to increase the level of employment.
This of course is a restricted estimate of indirect employment. For some discussion of the problems involved in obtaining complete estimates of indirect employment see Kaplinsky: Employment effects ..., op.cit., pp.29-31.

Two firms, both enjoying monopoly positions in Kenya, accounted for 91 per cent of this total employment.
<table>
<thead>
<tr>
<th>SUBSIDIARY</th>
<th>PARENT</th>
<th>COUNTRY OF ORIGIN</th>
<th>DATE MFG OPERATIONS BEGAN IN KENYA</th>
<th>% OWNED BY GOVT OF KENYA</th>
<th>4-DIGIT ISIC CODE</th>
<th>MAJOR PRODUCTS MANUFACTURED/PROCESSED IN KENYA</th>
</tr>
</thead>
<tbody>
<tr>
<td>British American Tobacco Kenya</td>
<td>British American Tobacco</td>
<td>UK</td>
<td>1907</td>
<td>40</td>
<td>3140-3111</td>
<td>Tobacco, cigarettes, poultry</td>
</tr>
<tr>
<td>Bamburi Portland Cement</td>
<td>Blue Circle Industries &amp; Cemeta Holdings (Ag.)</td>
<td>UK &amp; Switzerland</td>
<td>1954</td>
<td>20</td>
<td>3692</td>
<td>Cement</td>
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<tr>
<td>Brollo Kenya Ltd.</td>
<td>Zambesi Establishment (Liechtenstein)</td>
<td>Italy</td>
<td>1971</td>
<td>40</td>
<td>3700</td>
<td>Steel products</td>
</tr>
<tr>
<td>East Africa Industries</td>
<td>Unilever</td>
<td>UK</td>
<td>1954</td>
<td>34</td>
<td>3523, 3115, 3134</td>
<td>Edible fats, detergents, soft drinks</td>
</tr>
<tr>
<td>Philips Electric Lamps (E.A.) Ltd.</td>
<td>Philips N.V.</td>
<td>Holland</td>
<td>1970</td>
<td>-</td>
<td>3830</td>
<td>Light bulbs and records</td>
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<tr>
<td>Firestone</td>
<td>Firestone</td>
<td>US</td>
<td>1972</td>
<td>20</td>
<td>3550</td>
<td>Automobile tyres</td>
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<tr>
<td>Dunlop Kenya Ltd.</td>
<td>Dunlop</td>
<td>UK</td>
<td>1970</td>
<td>-</td>
<td>3550</td>
<td>Rubber floor tiles, adhesives, dart boards</td>
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<tr>
<td>East African Cables</td>
<td>Delta Group</td>
<td>UK</td>
<td>1965</td>
<td>-</td>
<td>3830</td>
<td>Steel cables</td>
</tr>
<tr>
<td>East African Oxygen</td>
<td>BOC Group</td>
<td>UK</td>
<td>1944</td>
<td>15</td>
<td>3511</td>
<td>Chemicals, gases, § welding products</td>
</tr>
<tr>
<td>SUBSIDIARY</td>
<td>PARENT</td>
<td>COUNTRY OF ORIGIN</td>
<td>DATE MFG OPERATIONS BEGAN IN KENYA</td>
<td>% OWNED BY GOVT OF KENYA</td>
<td>4-DIGIT ISIC CODE</td>
<td>MAJOR PRODUCTS MANUFACTURED/PROCESSED IN KENYA</td>
</tr>
<tr>
<td>----------------------------------</td>
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<tr>
<td>Booth Manufacturing Africa Ltd.</td>
<td>Comcraft Group</td>
<td>UK1/</td>
<td>1957</td>
<td>23</td>
<td>3819</td>
<td>Building and Construction materials, aluminium, copper, brass extrusions</td>
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<tr>
<td>Johnson's Wax E.A. Ltd.</td>
<td>Johnson's Wax</td>
<td>Switzerland</td>
<td>1968</td>
<td>3529</td>
<td>3115 &amp; 3511</td>
<td>Household insecticides</td>
</tr>
<tr>
<td></td>
<td>International</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Detergents &amp; chemicals</td>
</tr>
<tr>
<td>Diversy East Africa</td>
<td>Molson2/</td>
<td>Canada</td>
<td>1971</td>
<td>30</td>
<td>3529</td>
<td>Printing inks</td>
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<tr>
<td>Coates Bros. (E.A.) Ltd.</td>
<td>Coates Bros.</td>
<td>UK</td>
<td>1960</td>
<td>3529</td>
<td>3522 &amp; 3512</td>
<td>Pharmaceuticals &amp; agricultural inputs inc. fertilizers and pesticides</td>
</tr>
<tr>
<td></td>
<td>&amp; Comp. Ltd.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterling Products</td>
<td>Sterling-Winthrop</td>
<td>US</td>
<td>1959</td>
<td>3522</td>
<td></td>
<td>Pharmaceuticals</td>
</tr>
<tr>
<td>International</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicholas Laboratories E.A. Ltd.</td>
<td>Nicholas Group</td>
<td>Australia</td>
<td>1966</td>
<td>3522 &amp; 3523</td>
<td></td>
<td>Pharmaceuticals &amp; toiletries</td>
</tr>
<tr>
<td>Crown Paints</td>
<td>Reed International Group</td>
<td>UK</td>
<td>1960</td>
<td>3521 &amp; 3560</td>
<td></td>
<td>Paints, putty plastics</td>
</tr>
<tr>
<td>SUBSIDIARY</td>
<td>PARENT</td>
<td>COUNTRY OF ORIGIN</td>
<td>DATE MFG OPERATIONS BEGAN IN KENYA</td>
<td>% OWNED BY GOVT OF KENYA</td>
<td>4-DIGIT ISIC CODE</td>
<td>MAJOR PRODUCTS MANUFACTURED/PROCESSED IN KENYA</td>
</tr>
<tr>
<td>----------------------------------</td>
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<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Murphy Chemicals (E.A.) Ltd.</td>
<td>Brooke-Bond Group(^2)</td>
<td>UK</td>
<td>1957</td>
<td></td>
<td>3512</td>
<td>Pesticides &amp; fertilizers</td>
</tr>
<tr>
<td>Twiga Chemical Industries Ltd.</td>
<td>Imperial Chemical Industries</td>
<td>UK</td>
<td>1950</td>
<td></td>
<td>3512</td>
<td>Pesticides &amp; fertilizers</td>
</tr>
</tbody>
</table>

\(^1\) Originally established by Kenyan Asians (Chandaria family) who, after independence, moved their central office to England and established the Comcraft Group to manage their world-wide holdings.

\(^2\) Since 1978, previously owned by Diversey Corp, a US MNC.

\(^3\) Since 1978, previously owned by Glaxo, a UK MNC.
Labour As A Proportion Of Total Costs
In Manufacturing, Kenya, 1980

<table>
<thead>
<tr>
<th>ISIC</th>
<th>Large Firms</th>
<th></th>
<th>Small Firms</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L/O</td>
<td>L/I</td>
<td>L/O</td>
<td>L/I</td>
</tr>
<tr>
<td>Misc. Foods</td>
<td>2.9</td>
<td>3.2</td>
<td>6.3</td>
<td>7.0</td>
</tr>
<tr>
<td>Beverages &amp; Tobacco</td>
<td>10.3</td>
<td>13.2</td>
<td>16.5</td>
<td>17.3</td>
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<tr>
<td>Industrial Chemicals</td>
<td>10.1</td>
<td>11.6</td>
<td>3.8</td>
<td>5.2</td>
</tr>
<tr>
<td>Rubber Products</td>
<td>11.5</td>
<td>15.1</td>
<td>8.7</td>
<td>9.2</td>
</tr>
<tr>
<td>Pottery &amp; Glass</td>
<td>7.3</td>
<td>8.0</td>
<td>14.3</td>
<td>20.0</td>
</tr>
<tr>
<td>Non-metallic mineral products</td>
<td>8.9</td>
<td>10.3</td>
<td>9.3</td>
<td>9.8</td>
</tr>
<tr>
<td>Metal products</td>
<td>11.6</td>
<td>13.0</td>
<td>4.3</td>
<td>13.1</td>
</tr>
<tr>
<td>Non-electrical machinery</td>
<td>23.1</td>
<td>25.8</td>
<td>21.3</td>
<td>23.1</td>
</tr>
<tr>
<td>Electrical machinery&lt;sup&gt;1&lt;/sup&gt;</td>
<td>20.4</td>
<td>23.7</td>
<td>9.7</td>
<td>10.3</td>
</tr>
<tr>
<td>Total manufactures</td>
<td>7.6</td>
<td>8.6</td>
<td>8.5</td>
<td>11.3</td>
</tr>
</tbody>
</table>


<sup>1</sup> Data for 1978.


Peter E. Coughlin: Converting crisis to boom for Kenyan foundaries and metal engineering industries (Nairobi, Dept. of Economics, University of Nairobi, January, 1983).


Mario Luiz Possas, Mauricio Chalfin Coutinho and Maria Silvia Possas: Multinational enterprises, technology and employment in Brazil: Three case studies, Multinational Enterprises Programme Working Paper No. 21 (Geneva, ILO, 1982).
