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THE WORKER'S STANDARD OF LIVING

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CONTENTS

INTRODUCTION ........................................... Page 5

CHAPTER I: Determinants of the Worker's Standard of Living .... 7
   I. General Well-being or "Standard of Life" .................. 8
   II. A "Sum of Economic Satisfactions" ....................... 9
   III. A Composite of Goods and Services ....... 11
   IV. Levels, Norms and Standards of Living ... 12
   V. Income, Prices and Consumption ..................... 14
   VI. Population Growth and Family Type ........... 16
   VII. Social Services, Free Services, and Working Conditions .. 17
   VIII. Group and National Differences ............... 18
   IX. Summary and Definition .......................... 20

CHAPTER II: Description and Evaluation of Workers' Standards of Living 21
   I. Income ........................................ 23
      A. Distribution of Family Incomes ............... 23
      B. Average Family Income .................... 30
   II. Expenditures ................................ 31
      A. Food and Nutrition ....................... 32
      B. Housing ................................. 39
      C. Clothing ................................ 47
      D. Miscellaneous .......................... 49
   III. Social Elements in the Standard of Living .......... 51
      A. Health .................................. 51
      B. Education ............................... 53
      C. Social Services ........................ 54
   IV. Problems of Evaluation ......................... 54
      A. Intra-National Time and Place Comparisons ... 55
      B. International Comparisons ............... 56
      C. Other Methods .......................... 57
      D. The Measurement of Deficiencies .......... 57
      E. Norms, Standards and "Freedom of Choice" ... 59
CHAPTER III: Some Aspects of Workers' Standards of Living in Certain Countries

I. The United States of America
   A. Family Income per Unit
   B. Food Consumption and Nutrition
   C. Housing
   D. Health
   E. Literacy

II. Poland
   A. Income
   B. Expenditure
   C. Food Consumption
   D. Housing
   E. Health
   F. Literacy

III. India
    A. Income and Expenditure
    B. Diet Adequacy and Malnutrition
    C. Housing
    D. Health
    E. Literacy

IV. Japan
    A. Income and Expenditure per Family
    B. Income and Expenditure per Consumption Unit
    C. Food Consumption
    D. Housing
    E. Health
    F. Literacy

CHAPTER IV: Summary
INTRODUCTION

At its Session in October 1937 the Assembly of the League of Nations adopted the following resolution:

"The Assembly, recognising that technical progress in industry, agriculture and transport has made possible further advances in human welfare and recognising also that such advances depend upon economic co-operation between the nations:

"Invites the Economic and Financial Organisation of the League, in collaboration, when appropriate, with the International Labour Office, to take whatever steps it may deem appropriate for the examination of the following problems:

"Measures of a national or international character for raising the standard of living, the first stage of this enquiry being limited to a preliminary investigation, if necessary with the help of experts, in order that the next Assembly may be enabled to devote further attention to this question."

This Report has been prepared in accordance with the above resolution. It is preliminary in character, and is intended mainly to outline the problem and to indicate lines for further study. The first task is to clarify what is meant by standards of living and what are some of the determinant factors in the workers' standard of living. This is the subject-matter of Chapter I. In Chapter II a survey is made of available materials for the description of workers' living standards in different countries. In the same chapter are considered some of the problems involved in comparing living standards at different periods and between countries. The idea of national minima is suggested as a basis for evaluating workers' living standards and as a possible guide to policy. This is followed in Chapter III by a brief summary of available evidence on workers' living standards in four countries—the United States of America, Poland, India and Japan. This summary is presented, not for the purpose of comparing conditions in these countries, but chiefly to illustrate methods of describing workers' living conditions. The facts presented, however, give some idea of the nature and extent of poverty and of low standards to-day. Finally, in the summary chapter,
some of the more important lines of further investigation of the subject are indicated.

In the preparation of this preliminary Report the Office has had the co-operation of a number of agencies in several countries. In the United States, the Bureau of Labor Statistics of the Department of Labor and the Bureau of Home Economics of the Department of Agriculture have been particularly helpful. In Poland, the Institute for Social Problems and the State Institute for Hygiene have kindly supplied data on costs of adequate diets, on house rents and on food consumption. With regard to food consumption and nutrition in India, valuable assistance was given by the Nutrition Research Laboratories of Coonoor. The Office takes pleasure in acknowledging the assistance of these as well as of other agencies in the preparation of this Report.
DETERMINANTS OF THE WORKER'S STANDARD OF LIVING

The term "standard of living" has had a long career in the history of economic and social thought and a variety of definitions could be cited apparently conflicting in character. The differences in these definitions can, however, be traced largely to differences of emphasis on different aspects of the problem. Some writers identify standards of living with total income (money income plus income in kind), others with the goods and services purchased with the income and actually consumed or considered necessary by the individual or family. Still others find the essence of the standard of living not in the consumption of any particular set of goods or services, but in the maintenance of a given level of well-being which may be equally well provided by various combinations of goods and services. The idea is sometimes expanded to include well-being derived not only from goods and services but also from leisure, health, cultural pursuits, and other non-economic sources.

Each of the aspects emphasized in the above definitions has a certain relationship to all the others. Thus, money income sets a limit to the possible total consumption of goods and services which a given individual or family may purchase. The goods and services purchased and consumed are dependent on tastes and habits and on prices, and contribute in large measure to health, efficiency and the feeling of well-being. Leisure may be an alternative to larger income and to more consumption. Lastly, general well-being, in the widest sense of the term, is correlated with the attainment of desired health, comfort, adjustment to the community, which are in turn dependent, at least partly, on economic consumption.

The question at issue is to draw from the foregoing series of relationships those which may be considered as pertaining to the worker's standard of living and which may be used as a basis
for the present Report. In the following pages a more detailed analysis is made of the relations between the different aspects of the term "standard of living" leading up to a working definition which may serve the purposes of practical policy.

I. — General Well-being or "Standard of Life"

The phrase "standard of life" has been used to express the broadest concept discussed above, namely, general well-being in the widest sense of individual happiness. The "standard of life" or "way of life" would include all elements, economic and non-economic, which go to make up the life-pattern of the individual and which contribute to his well-being (or ill-being); that is, not only food habits, housing arrangements, customary clothing and consumption of other economic goods and services, but also working conditions, cultural enjoyments, the religious life, community activities, family relations, etc. In short, the phrase covers the entire range of economic, social, political, intellectual, moral and cultural considerations which affect a person's sense of happiness.

There can be no question about the influence which the social and cultural factors of life have on welfare in the narrower economic sense of the term. Thus, religious beliefs may affect food habits, and the ideas of general well-being may influence the valuations placed on material and economic standards. In many countries attempts to improve material standards of living would involve policies affecting general social and cultural ideas and institutions. Nevertheless, it is obvious that this large concept of a "standard

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1 "There is no precise line between economic and non-economic satisfactions . . . we can proceed from the undoubtedly economic at one end of the scale to the undoubtedly non-economic at the other end without finding anywhere a fence to climb or a ditch to cross." Edwin Cannan: Wealth, quoted by A. C. Pigou: Economics of Welfare, London, 1922, p. 11.

The following quotation may further illustrate this trend of thought: " . . . a moral judgment is implied in any operative standard of life. It is worth noting also that the conception of a standard of life is the point in which economics touch the frontier of other interests, for certainly no one supposes that any economic standard (i.e. any standard calculable in exchange values) can be discussed without reference to items in the general standard of life which have no exchange value. For example, a standard of life morally includes a reference to friendship or affection; no goods and services can be included in any standard which does not promote these non-economic goods, and therefore all assessments of the standard of life in terms of exchange-value should include a reference to non-economic goods." C. Delisle Burns: Industry and Civilisation, 1925, pp. 193-194.
of life " in the sense of a " way of life " involving the entire gamut of the relationships of man to his neighbour, to his environment, and to himself is too vague for the purpose of realistic studies of existing economic and social conditions as well as for purposes of immediate social policy. While this general concept is of value in thinking about the problem, it is beyond the scope of the present Report.

II. — A " Sum of Economic Satisfactions "

According to another view, the essence of the standard of living lies in the subjective satisfactions arising from the consumption of economic goods and services. According to this definition, a standard of living does not hinge on any specific collection of goods and services. An individual of a given economic or social group would not mind giving up one commodity for another, provided the satisfaction he derives from the consumption of the two is equivalent or, in other words, provided he feels equally well off in the two cases. This idea was incorporated in the definition of the standard of living quoted in a previous report of the Office as follows:

The term " standard of living " or, as it has sometimes been called, " standard of comfort " is intended to cover the sum of the economic satisfactions or utilities which an individual (or a family) derives from the consumption of the goods and services which he is able to obtain with his income available during a certain period of time 1.

The above definition, being subjective, is also highly individualistic. The standard of living is regarded as a sum of satisfactions, a level of well-being to the maintenance of which the individual attaches great importance. That the sum of satisfactions is not wholly arbitrary is due to the fact that the definition assumes (1) that the set or sum of satisfactions is considered essential by the individual concerned, and (2) that it is customary to him. The definition implies the possibility of dissatisfactions caused by the necessity for work, by deprivations of things one would like to have but cannot afford, etc. An individual's state of well-being as judged by himself is thus a balance of satisfactions and dissatisfactions, utilities and disutilities which tends

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to form a consistent whole and to remain in equilibrium despite the changes in the specific things consumed.

Owing to its subjective character, the above definition of the standard of living leads to a number of difficulties. As a psychological fact, the standard of living—at least in the present stage of our knowledge—cannot be measured in absolute units. In the case of a single individual, it is not possible to say how much satisfaction he derives from a given object; all that it is possible to say is that one can infer from the purchases he actually makes that he derives more satisfaction (without saying how much more) from one object than from another. Even more important is the fact that it is impossible to compare the satisfactions of two or more persons. Since there is no way of measuring the intensity of feeling, it becomes impossible not only to say by how much one man's satisfaction is greater than the other's, but even whether it is greater or less. There could logically also be no such thing as a standard of living of a group of persons. Furthermore, it would be impossible to form any measurement of standards of living, the sole criterion being the subjective state of mind of individuals. On the basis of this definition, the phrase "raising the standard of living" means increasing subjective satisfactions, which means that no proposed measure for raising living standards can be judged good or bad by anyone other than the individual. There would also be no way of judging whether certain actions would result in an increase of subjective welfare of a group of persons. If the definition of the standard of living were left at this point there would appear to be little occasion for writing a report dealing with measures for raising standards of living.

To overcome the dilemma outlined above, those who proceed on the basis of the subjective definition of standards of living are forced to make two main assumptions. First, that satisfactions are reflected in the way an individual spends his income, subject to limitations of price and of certain conventional habits. Second, that individuals whose economic position is the same and who belong to the same social group derive identical amounts of satisfaction from their consumption provided there are no special limitations to their freedom of choice and they actually do choose the same amounts and kinds of goods and services. These two assumptions are supposed to supply the bridge for the possibility of using statistical and other materials for the description and study of living standards of groups of individuals and families.
The validity of these assumptions is open to question, but it is not necessary to examine them here. What is important is that once they are made the argument is turned towards a consideration of actual goods and services consumed, income, and prices. In other words, the ground is shifted from subjective satisfactions to the objective elements in the standard of living, which is the basis of the next definition considered.

III. — A Composite of Goods and Services

In contrast to the subjective definition given in the preceding section, most of the more recent definitions of the standard of living run in objective terms. Despite the variations in their wording, most of them are in terms of "a sum", "a composite", "an amount", or "a supply", of goods and services enjoyed by an individual or family within a given period of time on the basis of a given income. For purposes of illustration, two definitions are quoted below.

By the standard of living, then, I understand a composite of the goods and services obtained in nearly the same quantities by normal families whose general mode of life is similar; or:

In general, a standard of living may be defined as such a sum of commodities and services of all sorts as is habitually consumed in a given length of time—say a year—by a person or a family group of given size and given social status. It is not itself a sum of money but a sum of goods. Its money cost will necessarily vary at different times and places and must therefore be recalculated periodically.

As may be readily seen, the above definition not only shifts the emphasis from satisfactions derived from goods and services to the goods and services themselves, but it also stresses the objective and social basis of the standard of living. As inductive studies of family budgets and consumer purchases show, families which derive their income from similar sources, which customarily receive about the same amount of income (within a given range), which are in approximately the same social-economic group, and are of similar size and composition, usually display similarities in the spending of their income, or, in other words, make approximately the same choices of goods and services. Such groups thus may be said to have the same standard of living as is shown in

1 Paul and Dorothy Douglas: *What Can a Man Afford?*, p. 50.
the complex of goods and services on which they spend their
income.

IV. — Levels, Norms and Standards of Living

One of the difficulties in studying workers' living standards
has been the confusion of terms due to the fact that no clear
distinction was drawn between what the workers actually consumed,
what they individually thought necessary or desirable, and what
was recommended as necessary or desirable as a result of scientific
investigation. To obviate this difficulty, the effort has been made
in recent years to introduce more generally the use of three terms,
especially with regard to consumption, namely, levels, norms, and
standards.

The plane or level of living (or "content of living") is defined
as the composite of goods and services actually consumed, which
may or may not be identical with what the individual or family
regards as necessary or desirable. In general, the goods and services
consumed by an individual or family are definitely limited in total,
at a given time, by the amount of income. The actual composition
of the items making up that total depends upon the tastes and
habits of the person or family in question and on the relative prices
of the various goods and services available in the markets to which
they have access. The level of living might be expressed in terms
of the money income which purchases it, or in terms of the degree
of health or comfort which it yields, depending upon the nature
of the problem in hand.

Norms of consumption, on the other hand, represent a combina-
tion of goods and services recommended by experts who base
their judgments on certain objective criteria. Thus, nutritionists
may define the kind and amount of foods necessary to achieve
a diet adequate to ward off certain diseases or to attain a positive
state of health (providing other factors are also favourable);
hygienists may specify housing requirements necessary to meet
minimum requirements adequate to avoid the occurrence of certain
diseases or sub-normal health conditions, excessive infant mortality,
and so forth. Experts may, to a less certainly objective degree,
specify the kinds and quantities of clothing necessary to meet the
hygienic requirements of the body. While health has been most
often used as the criterion for norms, it is apparent that experts
(for example, psychologists or social workers) might define certain
norms of consumption, work and leisure whose content would be
selected with a view to achieving other objectives, such as emotional balance, comfort or cultural development. It is apparent, however, that such criteria are less capable of objective measurement and that there would be a necessarily greater element of arbitrariness in the selections made by the experts if they tried to prescribe the norms or means to attain such ends.

Norms of consumption, while based on objective criteria, are not necessarily or usually divorced entirely from other factors. Thus, experts in setting up norms as a rule take account of tastes and habits at the points where the physiological or other criteria permit a choice. Thus, diets recommended by nutritionists as adequate from a nutritional standpoint are usually expressed, as far as possible, in terms of the foodstuffs customarily consumed by the group for which the diets are proposed. There is in fact an indefinitely large variety of specific combinations of foods, any one of which would be satisfactory from the physiologist's standpoint (i.e. would contain the requisite numbers of calories, grammes of protein, etc.) and among which the consumer might freely choose on the basis of his income and tastes while at the same time meeting the requirements of the norm. Furthermore, the various possible combinations of goods and services required by the norm may be expressed in terms of the money necessary to buy them at a given time and place; in other words, the norms may be combined with a recommended income necessary for attaining them.

The third concept to be distinguished is the standard of living defined as that consumption which the individual or family considers to be necessary and proper. The consumption considered proper may be either that which is habitual and customary to the individual or family or that to which they aspire and for which they strive as their legitimate and reasonably attainable goal. Actual consumption, i.e. the level or content of living, may deviate during short periods from the standard defined in this sense for several reasons, e.g. loss of income as a result of unemployment, etc. On the other hand, a windfall in income may temporarily permit actual consumption to be in excess of standards formerly considered necessary. In general, such divergence between actual consumption and the standard considered proper cannot be retained indefinitely: the family with a permanently reduced income gradually and painfully readjusts its standard to that level. On the other hand, the family with an increased income, given time for adjustment, soon finds that its standard exhausts the income.
The distinction of terms outlined above is important in so far as it helps to state more clearly the problem of policy in relation to the worker's standard of living. In the terms given above, the deficiencies in the worker's consumption differ in character and urgency. Such deficiencies may be due either (1) to a discrepancy between what he is accustomed to or considers normal and proper and the norms set up as an objective minimum or optimum; or (2) to a discrepancy between his *actual* consumption and such norms; or (3) to a discrepancy between what he can afford (actual consumption) and what he regards as normal and proper. But deficiencies differ in character and urgency. Where the level of living is very low, there is an absolute quantitative lack in simplest terms of food, shelter and clothing. Here the problem of raising the level more nearly in accordance with minimum norms or standards considered proper is the problem of relieving dire poverty. There are other cases when the group is at the subsistence level, or even at the decency level. To raise the worker's standard of living under these conditions might thus be interpreted as adopting measures which would harmonise the level of living with the standard considered proper or bring the latter into harmony as much as feasible with recognised and established norms, or to improve the content of living in general.

Such a statement of the problem comes within the boundaries of the economic and social aspects of welfare and presents a useful point of departure. It suggests also an answer to the question of freedom of choice which lies at the root of some current discussions of the subject. The discussion of this problem is reserved for Chapter II.

V. — Income, Prices and Consumption

In all considerations of the worker's standard of living, the interrelation of income and prices is of key importance. The real income of the worker depends on this interrelationship. In any given situation, the goods and services entering into the worker's standard of living are determined to some extent by habits, tastes and ability to use income effectively, but to a much greater extent by the size and stability of the income itself and its relation to the prices of commodities and services.

The importance of income as a determinant of the standard of living arises not only from the fact that it is the basis of the worker's capacity to consume, but also from the fact that it tends to fix
habits of consumption. It has long been pointed out that "when any particular income has been received by a class for a sufficient period to have become customary, the standard needs the income", and "the standard that exhausts the income soon becomes customary and conventional, and the goods bought are regarded as necessaries of life". This works both ways. On the one hand, it creates a feeling of distress when income is reduced in such a way as to make the maintenance of the customary level of well-being impossible. On the other hand, it forms at times psychological obstacles in the way of changing habits of consumption even after income is increased.

It was pointed out in a previous Office Report that changes in money incomes on the one hand and in prices on the other may have different effects on consumption, depending on changes in the relative prices of different commodities and on elasticities of demand. This subject is treated more fully in Chapter II. Here it will suffice to quote from that Report as follows:

Purchasing power in general depends on the relation of money income to the prices of commodities; purchasing power will be increased if income increases or if prices fall, and will be decreased if income decreases or if prices rise. Thus, in regard to the consumer, prices and incomes are in some respects only two sides of the same phenomenon, that of purchasing power.

But there are important differences in the effects which changes in prices and incomes may have on consumption. When the consumer's purchasing power increases either through a rise in income or a fall in prices, he tends to expand his consumption all along the line. If all prices increase or decrease proportionately, the effect on purchasing power will be exactly the same as if incomes decreased or increased in the same ratio. But as general price movements are accompanied by changes in the relative prices of different commodities, the effect on the distribution of the new purchasing power is likely to be different from the effects which a corresponding change in money incomes would have.

Besides the size of money income, its distribution of incomes and their stability have important effects on standards of living. Inequalities of income affect in large measure the character and direction of economic activities and thus employment opportunities and workers' earnings. Fluctuations in economic activities and therefore in workers' earnings have long been recognised as one

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1 A. L. Bowley, op. cit.
of the most serious factors of poverty and of low living standards in most countries\(^1\).

VI. — Population Growth and Family Type

Two other factors of importance in determining the worker's standard of living which are interrelated are the rate of population increase and the composition of the family with regard to size, sex and age, or family type. In terms of current analysis, there is said to be for each country during a given period an "optimum" population and an optimum rate of population growth, that is, a rate which maximises economic welfare—roughly, real income per head\(^2\). Any departure from this optimum in either direction reduces the standard of living\(^3\).

\(^1\) An idea of the extent of fluctuations in labour income is suggested by the figures given below:

**LABOUR INCOME IN THE UNITED STATES AND IN GERMANY, 1929-1932**

*United States (Millions of U.S. dollars)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Agriculture and mining</th>
<th>Manufacturing, building and electrical industries</th>
<th>Transport, communications and commerce</th>
<th>Public administration</th>
<th>Public and private service and miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>2,952</td>
<td>18,135</td>
<td>17,138</td>
<td>4,984</td>
<td>9,584</td>
</tr>
<tr>
<td>1932</td>
<td>1,200</td>
<td>8,034</td>
<td>11,229</td>
<td>5,277</td>
<td>5,792</td>
</tr>
</tbody>
</table>

*Germany (Millions of RM.)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Wages</th>
<th>Salaries</th>
<th>Civil Service salaries</th>
<th>Other labour income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>23,339</td>
<td>11,054</td>
<td>6,262</td>
<td>1,760</td>
</tr>
<tr>
<td>1932</td>
<td>14,000</td>
<td>7,379</td>
<td>5,042</td>
<td>1,637</td>
</tr>
</tbody>
</table>

**INDEX NUMBERS OF EMPLOYMENT IN VARIOUS COUNTRIES, 1929-1932**

<table>
<thead>
<tr>
<th>Year</th>
<th>Great Britain</th>
<th>Germany</th>
<th>France</th>
<th>United States (mfg.)</th>
<th>Czecho- Slovak</th>
<th>Italy</th>
<th>Japan</th>
<th>Poland</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1932</td>
<td>91</td>
<td>63</td>
<td>32</td>
<td>83</td>
<td>78</td>
<td>62</td>
<td>63</td>
<td></td>
</tr>
</tbody>
</table>

\(^2\) It should be noted that the idea of an "optimum population ", except in a few cases, is still largely theoretical in character. The criteria on the basis of which a country may be said to be under-populated or over-populated have been studied recently, but further investigations will be necessary before it will be possible to apply these criteria in concrete cases scientifically. See Imre Perenczi, *The Synthetic Optimum of Population*, International Institute of Intellectual Co-operation, Paris, 1938.

\(^3\) Many parts of agricultural India, for instance, are even more densely populated than *industrial* Britain; under the economic and social conditions existing in India, this results in serious pressure on subsistence and accounts in a large measure for low levels of living. See H. B. Butler: *Problems of Industry in the East*, 1938.
Size and composition of family are important in so far as they affect expenditure liability which has to be met out of family income. Differences in the size and composition of the family give rise also to important differences in the total income and in the amount and kind of goods and services required. The effects of family type on the kind and character of family expenditures are obvious, e.g. on the need for and consumption of milk, clothing, etc. But these effects are of comparatively small range. In general, as various budgetary studies would seem to indicate, the variations in the size and composition of the family affect more the quantities than the kinds of goods and services consumed.

VII. — Social Services, Free Services, and Working Conditions

In most countries to-day, the worker’s standard of living depends not only on what he buys in the market but on goods and services supplied partly or entirely, directly or indirectly by the community. In other words, part of the worker’s income comes in the form of social services\(^1\) and of so-called “free” or “social income”. Free schools, free hospitals and medical clinics, public parks and concerts, low rent housing, good roads, etc., are only a few of the goods and services which have entered increasingly into the worker’s standard of living as a result of changes in social organisation and social policy.

Among the free services which affect the worker’s living, two call for special emphasis, namely, those relating to health and schooling. Though the subject has been but little investigated\(^2\), the special studies so far made would indicate that there is a definite correlation between ill-health and income, especially on low income levels.

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\(^1\) The term “social services” is understood to include only those services which satisfy both the following criteria:

\((a)\) that their object should be to cover one of the following risks: industrial accidents, occupational diseases, sickness, maternity, invalidity, old age, involuntary unemployment and family responsibilities;

\((b)\) that they should be established on behalf of classes of the population consisting mainly of wage earners and persons of small means working on their own account.

See *International Survey of Social Services*, International Labour Office, Studies and Reports, Series M, No. 11, 1933.

\(^2\) Interesting remarks on the fact that and the reasons why “writings dealing with the history of man in its various aspects contain (for many centuries) almost no reference to health or disease except occasionally in very detailed biographies or when an epidemic carried off thousands of people” may be found in J. H. S. Bossard: *Problems of Social Well-being*, 1927, p. 4.
Elementary schooling and the provisions for vocational training affect the worker's capacity to earn his livelihood. As is well known, public authorities in recent years have not stopped at this point, but have provided more and more free facilities for the acquisition of general knowledge, recreation, and aesthetic enjoyment. These are definitely elements in the worker's standard of living depending on social policy.

The worker's standard of living is further affected by the way in which he and his family gain their income. Most economists have insisted on the "pain" or "disutility" of work as a negative element to be reckoned, as it were, against the "utility" of wages as a positive element of income. But the "disutility" of work depends in large measure on the physical and moral conditions under which work is carried on (conditions of air and light, safety provisions, methods of management, etc.), on the duration of working periods, on the relative level of remuneration\(^1\), etc. Particular importance attaches to two factors, namely, duration of work and regularity of employment. The former is important in so far as it determines the range of time within which consumption and leisure can be enjoyed; the latter affects the stability of the worker's earnings and his capacity to maintain and plan consumption on the customary level.

The close interrelation between the various elements indicated above suggests the necessity of extending the term "standard of living" so as to cover working conditions, social services and "free income". In other words, the worker's standard of living includes the consumption of goods and services purchased, free and social services and conditions of work. The worker's living standard is thus affected, first, by the size of the money income or wages, its relation to prices and the way in which it is spent; second, by the conditions under which the income is earned; and third, by those social provisions which result in protection against risks or in "free income" which affect most closely health and physical well-being.

**VIII. — Group and National Differences**

Apart from small variations, individuals and families within the same social-economic group or class tend to have, in a given period

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\(^1\) This is important independently of the absolute amount of remuneration. It is obvious that a worker may feel dissatisfied if he earns less than another who does the same kind and quality of work.
of time, a certain average set of commodities which is fairly representative of the consumption of the group. There are, of course, articles or services the expenditure on which may be different in families which otherwise are much alike, but the spread or dispersion of the consumption (or expenditures) around the average is not very wide; and the spread will be smaller, the smaller the income. It is not necessary to examine the various influences which make for similarity of tastes, habits and consumption within groups that are economically and socially homogeneous. What is important here is to emphasise the fact that standards of living are shaped by group influences and that this group character affects the problem of their evaluation and of their improvement.

It is thus inaccurate to speak of "the standard of living" of a country as a whole. There is a number of living standards of different groups in a community at any time which cannot be fully represented by an average. On the other hand, it is undesirable, for purposes of analysis, to classify a population into a large number of groups on the basis of small variations in income and expenditures. In general, as the study of family budgets indicates, there are several large social-economic groups in most countries each of which has a more or less common character with regard to income and its standard of living. Within each of these groups there are, of course, variations in income and in ways of spending it. But these differences are small, are due to chance variations within the group, and do not, therefore, destroy the essential homogeneity of the group. As to groups within the working population itself, recent family budget studies have distinguished between skilled and unskilled workers, clerical and salaried professional workers, urban and rural workers, etc.

While standards of living differ between groups of one country, they also show considerable variations between countries. The income and expenditures of similar social-economic groups in dif-

1 "It would, at any rate, in many classes be found that there was no great divergence among the majority of the class. Not only is originality rare and the influence of custom universal, but convention is very strong. In some cases any great divergence from the mode in residence or of living and clothing would make a man unacceptable to his employer, in others to his fellow-workers. In many cases there is no alternative as to housing, and little variety in the goods sold at accessible shops. . . . In many classes expenditure on house-rent, food and clothes is practically determined by the custom of the class; but expenditure on insurance, amusement, tobacco, drink, subscriptions, books, and other things not of primary necessity may vary greatly, when the income leaves a margin for such things. It is to a great extent in the variation of free expenditure and in the employment of leisure time that individuality has play." Bowley, op. cit., pp. 151-152.
ferent countries show wide differences. While these differences can be explained by many factors such as climate, racial qualities, etc., they are also in some measure the result of psychological and cultural influences. In these national differences of consumption habits one may see the interconnection of the ideas of "general well-being" and economic well-being referred to earlier in this chapter.

The group and national differences in standards of living are significant in so far as there is a tendency to compare standards and to use such comparisons for purposes of policy. Whether such comparisons can properly be made, and by what methods is considered in Chapter II.

IX. — Summary and Definition

The discussion of the previous sections may now be briefly summarised in a definition which may serve as a basis for considering the relation of social and economic policy to standards of living. Briefly, it was seen that while standards of living contain a subjective element—namely, the attitude towards economic goods and life in general—it is not within the scope of this Report to consider this element.

In view of this, the standard of living is here described in objective terms as consisting of three main elements: (1) the level of consumption, or the composite of goods and services of a specific quantity and quality consumed by an individual, family or group within a given period; (2) social services and free services, particularly those which relate to health, education and recreation; and (3) working conditions which affect not only the worker's health and earning capacity but also the size and regularity of his income.

On the basis of this definition and of the distinction between levels, norms and standards, the problem of raising living standards may be more precisely described. It is in the first place a problem of doing away with poverty, and secondly of improving the content of living of all workers with regard to consumption, social and free services, and working conditions.
In the preceding chapter, the main factors which determine the workers' standard of living have been examined and their interrelations discussed. In the present chapter attention is directed to the materials available concerning these factors and to the methods of describing and evaluating them.

As pointed out in Chapter I, the number of elements which may be studied as part of the standard of living is very large. To cover this aspect of the subject fully would prove an enormous task; some information concerning the various determinants of workers' standards exists for all countries, though much of this information is incomplete, out of date or otherwise inadequate. In this preliminary Report, the discussion is, therefore, limited to a consideration only of the most important elements in the workers' standard of living, and all that is attempted here is to indicate the chief sources of information and how they can be used for appraising the standards of living of workers and their families.

In the preceding chapter it was shown that the most significant element of the worker's standard of living is his income or rather the income available for the persons dependent on a common income. The family income is perhaps the simplest, though not the only determinant, of its standard of living. The material available on incomes of workers and their families is therefore

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1 The tendency in recent years has been to enlarge the scope of family living studies so as to get as clear a picture as possible of the economic and social life of the mass of the people. Some investigators have aimed at including in their studies such elements as per capita income, the extent of employment, the amount of illness and the mortality rates, the extent of savings, loans and capital changes; the conditions of work, the use of leisure, general cultural conditions, etc. The problems arising in the making of family budget enquiries have been studied by the Office in a Report (Studies and Reports, Series N, No. 7) and a further Report on the subject is in preparation.
treated first and the various sources of information are reviewed. The next topic treated is that of how the income is spent. Satisfactory standards of living necessitate as a minimum adequate food, shelter and clothing. Family budget enquiries are the principal source of information on these matters.

There remain, however, various other elements which cannot be overlooked in any discussion of worker's standards. The worker's health, his education and amount and use of leisure are all factors which determine in some measure his standard of living. These are, of course, to a large extent dependent on income, but they are fields in which social policy and community effort, rather than individual choice, play a large part and they cannot always be measured statistically. These matters are therefore treated separately.

A considerable amount of information on the statistical and other aspects of the various elements in the worker's standard of living has already been published by the International Labour Office in recent years. In the following pages it has been considered sufficient to call attention to this material, and to give illustrative examples of the way it can be used to throw light on the subject. In addition, however, it has been thought desirable to make a more detailed study of certain countries, in order to survey the data available and to illustrate the methods of describing the living standards of the workers in these countries. The four countries selected are the United States of America, a large and a highly industrialised country; India, a large area of over 360 million inhabitants where special problems and conditions arise; Japan, a modern industrial country of the Far East; and Poland, a large area in Eastern Europe predominantly agricultural. In presenting the available data on these countries, it is not intended to make any comparisons between them. The only purpose is to indicate how living standards of various countries may be described so as to provide a basis for more precise judgments in matters of policy.

This chapter will thus summarise existing materials on income, expenditure, nutrition, housing, etc., and will discuss the problem of methods of evaluation. A description of living standards in the four countries mentioned will be presented in Chapter III.

1 See, e.g., the Year-Book of Labour Statistics, the International Survey of Social Services, the statistical part of the International Labour Review, the Report on Workers' Nutrition and Social Policy, etc.
I. — Income

Income, as pointed out in Chapter I, is the most important single determinant of the worker’s standard of living. It is the source from which in the long run all the purchased elements of the standard of living must be paid for. The amounts of incomes actually received thus furnish an upper limit to the standard of living in so far as it is dependent upon purchased goods and services. Also, the higher the income, the greater the freedom for choosing the goods and services which make up the particular standard of living.

For the purpose of describing and measuring standards of living, family income rather than individual income is the significant item. A standard of living is a family matter. In order to obtain the requisite information for determining the standard of living of the family, not only must data on family incomes be available but also data on the composition of the families, since, other things being equal, large families require larger incomes to maintain equal standards. The income per person or per unit of the family, therefore, is the desideratum.

A. DISTRIBUTION OF FAMILY INCOMES

(1) Census Data

No country has published statistical data showing for the entire population the distribution of families according to size of income and size of family, or a distribution of the population according to size of income of the families.

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1 Income is here defined broadly to include not only money receipts, but also the imputed value of receipts in kind. Even the most advanced countries include large sections of the population whose income to an important degree consists in the consumption of their own products. Furthermore, payments in kind are a more or less important form of remuneration in many occupations—e.g. agricultural labourers, domestic servants, etc. However, in some cases, owing to the statistical difficulties involved in attempting to estimate the money value of receipts in kind, the latter are disregarded and the amount of money receipts taken as the size of the income.

2 In a particular year the goods and services purchased may be paid for by changes in capital, by borrowing or other adjustment, and similarly in some years savings may be made out of income; in these respects, the income of a particular year may not correspond exactly to the standard of living as indicated by the goods and services purchased in that year. So far as goods and services furnished free by the community or by the State are concerned, the cost of these may be considered to be defrayed by taxation, but it remains true that so far as individual families are concerned, the amounts paid in taxes do not correspond with the value of the free goods and services which may be enjoyed by the particular family.

3 Except in cases where an individual lives alone and has no dependants. Such cases are a small part of the population of a country.
A close approach to the latter is found in a study based upon the Swedish Census of 1930. The Swedish Occupation Census of 1930 gives in addition to the number of persons gainfully occupied in each occupation the total number of persons dependent upon each occupation, and the total income received. From these figures the average income per person gainfully occupied in each occupation and the average income per adult unit (children under 15 counted as half an adult) of all persons dependent upon the occupation, including both the gainfully occupied and their dependants, has been calculated. The entire population is then distributed according to the size of income, not of income received by each individual family, but of the average income per adult unit received by all families in each occupation—that is, all persons dependent upon the particular occupation are classified in the income group in which the average income per adult unit for that occupation falls. The result is a rough approximation to a distribution of population according to family income.

(2) Estimates

An estimate of the distribution of the population according to per capita family income has been made for Great Britain by Sir John Boyd Orr in his study on Food Health, and Income, using income-tax data, data on earnings according to occupation and data on the number of wage earners and dependants per family. The technique of such an estimate is discussed in detail by Colin Clark, who describes the results obtained in a sample of 23,000 families enumerated in the 1931 census, with special reference to the number of wage earners and dependants per family.

An estimate of the distribution of the population according to

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2 For two other countries—Australia and New Zealand—the census of occupations includes data on incomes or income class in conjunction with occupation and industrial status, i.e. whether wage earners, employers, or persons working independently. Since in the census lists the data for each family are usually placed together, tabulation of the material by families should be possible, giving the distribution of families according to income and size and the distribution of the population according to size of family income, separately for the wage earners and other parts of the population. Such tabulations, however, have not been published.


family income in the United States is contained in a publication of the Brookings Institution.

(3) Materials for Estimates

(a) Partial Data on Family Incomes

Partial data on family incomes, or family incomes for samples of a population, are to be found in most family budget enquiries and in certain other types of study. So far as the former are concerned, family budget enquiries are for the most part limited to relatively small samples, usually less than 1,000 or 2,000 families. They cover wage earners' families in practically all cases, but in many cases the families of salaried employees are also included. In the United States a study of wage earners' family budgets covers a sample of approximately 16,000 families; also for a preliminary sample for a general study of consumer purchases covering approximately 315,000 families drawn from six general regions of the country, from all income ranges, from large, middle-sized and small cities, villages and farms, data were obtained on earnings and income in conjunction with family composition.

A special sample census in Sweden covering one-fiftieth of the entire population of the country gives family incomes, size of household, number of children under 15, together with certain data on housing for nearly 32,000 households, with over 120,000 persons in 100 rural communes.

(b) Data on Personal Incomes

A large mass of data is available on the distribution of personal incomes, that is, on the number of persons in a country or region whose income per year (or other time unit) is of a specified amount or comprised between specified limits. One source is the censuses

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1 Maurice Leven, Harold G. Moulton and Clark Warburton: America's Capacity to Consume, Washington, D.C., 1934; see especially Chapter V and Appendices.
of personal incomes, another the tax returns, a third the statistics of wages and earnings, etc. The value of these sources for throwing light upon distribution of family incomes is difficult to appraise: they must be used in conjunction with estimates of the frequency of more than one income to a family, and for purposes of determining the distribution of incomes per capita or per consumption unit in conjunction also with data on size of family.

(i) *Censuses of personal incomes*

Censuses of incomes received by individuals are few. Such censuses have been conducted by the Commonwealth of Australia, 1915 and 1933; New Zealand, 1926 and 1936; Denmark, 1916; State of Pennsylvania, 1934; State of Wisconsin, 1934. Without going into details, it may be noted that each of these censuses presents important peculiarities as regards the definition of income, the reliability of its results, the classification in which they are presented, the time unit for which income is measured, and so on.

Tabulations of data from the Australian Census of 1933 give the distributions of breadwinners and of others ("includes persons engaged in home duties . . . scholars, and other dependants ") by income class and sex ¹, and distributions of employees, classified according to whether they were full-time or part-time, employed or unemployed, by income classes and conjugal condition. These same persons are also classified according to conjugal condition and the number of their dependent children, but this latter information is not related to their income categories ². Distributions of breadwinners' incomes are also given separately according to whether or not the breadwinners were working on their own account, etc. ³.

In the New Zealand population census of 1926 data were collected on the income category into which the personal incomes of all persons over 16 years of age fell. The data are presented by geographical district, occupation, and other factors ⁴.

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Mention may also be made here of a special census of population and unemployment in the State of Michigan, U.S.A., in 1935, which gives the distribution of 60,000 employed and unemployed workers according to income, classified by industry and size of community 1.

(ii) Income-tax returns

Income-tax returns give a comprehensive picture of personal incomes above the tax exemption limits which vary from country to country. They are, however, of relatively little value for purposes of estimating the distribution of family incomes of wage earners, and of other low-income groups, since such incomes fall in large part in the lowest brackets of the income-tax schedules or are below the limit of exemption; the statistics, as published, generally do not show the number of persons in the family. The problem of utilising the income-tax returns depends therefore upon the possibility of obtaining data from which to estimate incomes below the tax limits. The various types of deductions for children and dependants, and the fact that also in some cases figures show, not the incomes, but the tax paid (from which incomes have to be calculated) are further difficulties.

Among countries which publish data on incomes from income-tax returns may be mentioned the United States, Great Britain 2, France 3, Poland, Finland, Estonia 4, etc., no attempt being made here to give a complete list or even to mention all the countries for which data presenting some features of special interest are available.

In some countries, for example Germany, data are available, not only for the incomes of persons subject to tax, but also for those of persons exempt from tax (owing to deductions), and the two

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2 For Great Britain, Clark prepared a distribution of personal incomes in 1929, adjusting income-tax and other data to this purpose. Clark, Colin: op. cit., p. 109.
3 For France data are presented on the income distribution of persons with incomes subject to the general income tax, with the number in each income class who are single or divorced without children and the number married without children. The income distributions of persons with taxable wages, etc., are also given. France: Présidence du Conseil, Direction de la Statistique Générale et de la Documentation: Annuaire Statistique. 52ème Volume, 1936. Paris, 1937, p. 243.
4 The Estonian Year-Book gives a distribution of persons paying income tax according to the amount of tax paid, from which the incomes can be re-computed. These data are shown separately for independents and wage earners and separately for agriculture and for industry, commerce and transportation. Estonia: Riigi Statistika Keskbüroo. Estonie de 1920-1930, Résumé rétrospectif. Tallinn, 1931, p. 285.
groups together give a general picture of the distribution of personal incomes.

(iii) Statistics of wage rates and earnings

A vast mass of data is available on wage rates and earnings. For the most part these data are in the form of averages per person and are not helpful in determining distributions. Much of this material on wages is in the form of hourly, daily, or weekly wage rates or earnings and offers therefore merely one element in the data needed to obtain annual incomes. For that purpose estimates of the amount and distribution of unemployment, sickness, etc., must be available.

The principal sources include the Year-Book of Labour Statistics published by the International Labour Office, which gives a general summary presentation of the principal statistics available in the several countries. For each principal country there is a large list of sources to be consulted, from which it is difficult to make a selection for mention here.

(iv) Other sources

Social insurance statistics often contain data of the incomes or earnings of the insured.

For Czechoslovakia the distribution of workers insured against sickness according to their basic wages is available. A distribution of non-manual workers in private industry classified according to their annual salary is also available from the statistics of their obligatory retirement insurance. For Germany, data are obtained as a result of the contributions to the national systems of invalidity and old-age insurance which are compulsory practically for all wage earners, including agricultural labourers and domestic servants. Data for France are derived from the returns of the General Social Insurance scheme, which covers all non-agricultural wage earners.

For Norway data of the distribution by income classes in 1934 and 1935 is available for members of the official sickness funds.

The distribution of non-agricultural workpeople insured for

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retiring pensions, according to weekly earnings, is given by sex and district for Poland in 1934.  

Special censuses or studies are sometimes a source of valuable information on incomes and the distribution of incomes. In this connection may be mentioned the special census of earnings of male wage earners in cities of 10,000 population and over in three provinces in Western Canada. This report gives the distribution of male wage-earning heads of families according to earnings groups, showing for each earnings group the total number of persons in the family and the number of children by age groups.  

(c) Data on Number of Income Receivers per Family and Size of Family

For the sake of completeness brief mention should be made of statistics from which the number of income receivers per family and the size of family may be obtained or estimated.

So far as size of family is concerned, statistics of family size are available for the entire population in a number of countries. For example, censuses of the United States of America, Great Britain, and many other countries, give data showing the distribution of families (in the sense usually of the household of persons living together under a common roof and eating at a common table) by number of persons in the family. For the most part, however, these data are not segregated so as to show separately the size of the family of the wage-earning population or the number of earners and dependants by family. In this respect, therefore, data on size of the family from special studies, e.g. family budget studies, may be utilised to indicate how far the distribution of families in the wage-earning class agrees with that in the general population.

The question of the number of income receivers in the family is one on which it is difficult to throw light except by special studies. No comprehensive material on this subject is available. One special study is the sample of 23,000 schedules of wage earners' families selected from the British Census of 1931 analysed to show

2 Canada: Dominion Bureau of Statistics: Earnings of Wage-Earner Heads by Tenure and Size of Family for Cities of 10,000 Population and over. Census of Prairie Provinces, 1936. Bulletin No. XXXII, Ottawa, 1938. Though these data partake of the advantage of a census, it scarcely needs to be pointed out that for the purposes of estimating the distribution of family incomes the restriction to cities of three provinces, the fact that only earnings and not incomes are taken into account and that the earnings of the head only and not those of other members of the family are included, constitutes serious limitations.
distribution of wage earners per family. Material on this point will be available for the United States in a sample of some 315,000 families in the Study of Consumer Purchases as well as for the sample of 16,000 wage earners' families in the Study of Money Disbursements of Wage Earners and Clerical Workers.

Practically all family budget studies contain data on sources of family income, including earnings of different members of the family, and thus throwing light upon the number of wage earners per family and upon the relative importance of their contributions. The studies in which the distribution of family incomes has been estimated generally throw some light upon the sources of data utilised for estimating the number of wage earners per family as well as on the methods by which this information is used in the calculation of family incomes.

B. Average Family Income

If data on the distribution of family income is not available, a more modest task is to determine the average family income of the population or of the wage-earning part of the population. An approximation to the average income per capita of the population or of the wage-earning part of the population can be found by dividing the total national income by the population, or by dividing the income received by the wage-earning part of the population by the number of persons in wage-earning families. With regard to the average per capita income of the population, attempts have been made to estimate this for a number of countries. One of the most recent of these presents estimates of average per capita income for 28 countries.

Estimates of the total income received by wage earners are difficult to make, especially the income from other sources than wages. The division of the total wages received by wage earners by the total number of persons or, if possible, the number of consumption units, in wage earners' families, would fall below the true figure. The proportion of such income other than wages received by wage earners from such other sources as shown by numerous family budget studies is not great.

Such estimates of average incomes per capita, etc., while available for a considerable number of countries, are not sufficiently accurate

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and are likely to be misinterpreted in any attempt to compare standards of living in different countries.

II. — Expenditures

While income may be deemed the most important determinant of the standard of living, a study of how the income is spent shows the concrete elements making up the standard so far as it depends on income. Data on family expenditures are available in family budget enquiries which give information on goods and services purchased by selected families of varying size and composition and of varying income levels.

During the last ten years family living studies have been undertaken by some 25 countries, including all important industrial countries. These studies are summarised in the *Year-Book of Labour Statistics* and in the *International Labour Review* published by the International Labour Office. Most of these enquiries relate to families of industrial workers living in urban and industrial centres. In some cases the studies cover also families of agricultural workers. In addition, a number of studies include families of salaried employees and civil servants.

These studies for the most part cover a range of income levels, so that a comparison of the expenditures of families at different income levels affords a clue to dependence of living standards upon income. The full analysis of proportions spent for different major items—food, shelter, clothing and miscellaneous items—throws light upon variations in standards of living in these respects. The various studies include, in addition to the direction of expenditure, details on the composition of the family, the occupation of the head of the household, sources of income, quantities of goods and services consumed, etc. So far as expenditure is concerned, data are analysed according to income or, more usually, expenditure classes, either expenditure per family or expenditure per consumption unit. With particular reference to food and housing for which standards or norms of adequacy can be more definitely established, a more detailed analysis of the available data is presented below.

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1 For a discussion of “consumption unit” see *International Labour Office: Workers' Nutrition and Social Policy*, 1936, Chapter III.
A. Food and Nutrition

The physiological requirements which food must satisfy include a sufficient provision of energy or calories depending upon the needs of each individual with reference to his age, sex and physical activity, appropriate amounts of proteins, carbohydrates and fats and necessary minerals and vitamins. If the allowance for food in a family budget is insufficient, one or more of the necessary elements for adequate nutrition may be entirely lacking or be present in insufficient quantities. Apart from satisfying physiological requirements, food expenditures may provide for food in excess of the minimum necessary for optimum health, or may include expenditures for special foods which gratify taste and provide variety to the diet, or may include margins for waste. The only points which will be discussed in detail here are those which relate to the provision of food to fulfil the optimum requirements, that is, whether the food budget is adequate to satisfy established norms for protein requirements, energy and for the protective foods.

Data on food consumption are of two types: (1) general statistics of food production, imports and exports, and of food consumption for entire areas, and (2) specific studies of food consumption of individual families. These two sources may be utilised in combination with data on income distribution to form a basis for estimates of food consumption in different classes of the population throughout a country. This combination method is used, for example, in a study made by Sir John Orr of nutrition in Great Britain, in which the conclusion is reached that the food consumption of about half the families of Great Britain falls short of the optimum, either because of insufficiency in amount of energy or insufficiency of one or more of the necessary minerals or vitamins.

(1) General Statistics of Food Consumption

Food available per capita. — Data on national consumption of various foodstuffs, per capita, in several European countries, the British Dominions and the U.S.A. are contained in the League

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1 Optimum health—"the standard of health adopted is the physiological or ideal, viz., a state of well-being such that no improvement can be effected by a change in the diet." ORR, Sir John Boyd: Food, Health and Income, London, 1936, p. 12.
2 Ibid.
of Nations’ Nutrition reports. Various estimates for a larger number of countries are also summarised in the study on *Workers’ Nutrition and Social Policy* published by the International Labour Office. Data of national consumption, even for foodstuffs for which accurate estimates can be made, are satisfactory only for indicating very wide divergencies in diets, since no means is provided for differentiating between the consumption of the various groups of the population. Furthermore, there are often considerable gaps in the data necessary to estimate the amount of food available for human consumption and in particular to estimate the proportion of this amount available for consumption by the working classes. Only where the assumption can reasonably be made that all classes of the population are on a fairly uniform basis so far as food supply is concerned (as was the case in many countries during the world war, when the entire population was rationed with respect to certain foodstuffs), or where figures are available showing the probable differences in consumption by different groups of the population (as used by Sir John Orr in his study cited above) can figures derived from this source be applied to the problem of determining the level of food consumption of the working classes.

(2) *Family Budget Studies*

*Food consumption per family or per consumption unit.* — Studies of actual food consumption in families of wage earners are available (though in many cases out of date) as part of family budget studies made in many of the principal countries of the world. These studies are in most cases directed to an analysis of incomes and expenditures, including expenditures for food, but in the majority of cases, especially in studies recently made, information is available not only with regard to money expenditures on food, but also with reference to the physical quantities of specific foodstuffs consumed. Most, if not all, of these studies include data on size of family, and for the most part the data on food consumption are related to the number of consumption units in the family, the latter being based usually upon the relative requirements for energy of adults and children of different age and sex. A summary statement of the more important of these studies is contained in the *Year-Book of Labour Statistics*, covering recent studies of family budgets of some twenty

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countries, and in an article on "Recent Family Budget Enquiries" published in the *International Labour Review* for November 1933. Since these figures were published, a number of important enquiries have been made, the largest of which is that made in the United States including a large sample of many thousands of wage earners' families. In Great Britain a study is now in progress covering a large sample of families of wage earners.

In general, however, these family budget studies are based upon a relatively small number of cases, owing to the difficulty of obtaining the full information necessary for a large number of families. Hence it becomes difficult to draw conclusions applicable to the working class as a whole, on account of the difficulty of proving that the sample is representative. However, if the evidence indicates that the food consumed in the selected families is inadequate, it may be inferred that the food supply for the working classes from which the sample was drawn is also inadequate. Such generalisation is usually justifiable, since the procedure of limiting the data to families which kept complete records of food consumption over a long period, such as a year, is such as to ensure that they in fact represent the more intelligent and more well-to-do portion of the group sampled. In general, figures based upon family budgets give two types of data: (1) those based upon the percentages of expenditures which are spent for food and (2) data showing the quantities of food consumed per family or per consumption unit.

(a) *Percentage of Food Expenditure*

Practically all family budget enquiries show the percentage of expenditure which goes for food. In practice it has been found that the percentage of expenditure for food can be used as a rough index of the worker’s level of living. It appears that, with increasing income in each area studied, smaller percentages are spent for food. Hence, the smaller the proportion spent for food, the higher the standard, or, conversely, the higher the proportion spent for food, the lower the standard of living. However, attention has been drawn to the fact that in certain cases (as shown, for example, by certain Far-Eastern enquiries or by studies relating to the unemployed), when income is below a certain point, the percentage spent for food tends to increase with income up to a certain point. After

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1 *Study of Consumer Purchases*, cited above.
2 See percentages given in the *Year-Book of Labour Statistics*. 
income reaches this point, the percentage spent on food tends to decrease as income increases further. This suggests that below a certain critical income level, other needs, e.g., shelter and clothing, are more imperative, once hunger has been allayed, than the demand for full satisfaction of food requirements.

(b) *Expenditures on Chief Groups of Food*

Information on the distribution of the food budget, according to specific groups such as bread and cereals, meat, fish, milk and milk products, vegetables and fruits, miscellaneous foods, etc., is available as a result of most of these family budget studies. The results for some fifteen countries are shown in the 1937 edition of the *Year-Book of Labour Statistics*. An analysis of these percentages in conjunction with variations in income indicates that at low levels of income a large proportion is spent for the energy-giving foods, with the result of a relative deficiency in the more expensive protective foods. As income increases, the protective foods form a larger proportion of the food budget.

(c) *Quantities of Food Consumed*

A considerable proportion of these family budget studies give not only the percentages of the budget spent for food but also the specific quantities and show not only quantities per family but also the quantities consumed per consumption unit. The data available from the chief recent enquiries on family consumption, the quantities of each of the principal foodstuffs consumed by workers and salaried employees’ households, have been brought together with a rough analysis of their nutritive content, by the International Labour Office (*Workers' Nutrition and Social Policy*). Such data are available for many European countries, the U.S.A., Brazil, Mexico and Palestine. The *Year-Book of Labour Statistics* for 1935-1936 summarises the data available on the quantities of each of the principal types of foodstuff consumed by workers’ households. These references also consider the differences in food consumption at different income levels.

Summaries and references to the scattered studies made in the Far East are contained in the *Preparatory Papers of the Inter-governmental Conference of Far-Eastern Countries on Rural Hygiene*; for instance, the results of several Chinese studies covering a range of social classes are compared in the Report on China.

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1 Published by the Health Section of the League of Nations, Geneva, 1937.
(d) **Appraisal in Terms of Adequacy**

For purposes of judging the standards of living as shown by food consumption the food consumed can be appraised in terms of adequate nutrition. Optimum standards or norms of adequate nutrition have been set up by means of physiological research in terms of calories, proteins, necessary minerals and vitamins. These standards take into account the age, sex and physical activity of the individual.

Comparatively few of the family budget studies made thus far have included any attempt to appraise the actual food consumed by workers' families in terms of adequacy on the basis of these norms or standards. Among those in which some attempt at appraisal is made may be cited the recent study in the Union of South Africa in 1936 and certain studies of diets in the United States, including a series of studies made in connection with the *Study of Consumer Purchases*. In one or two other cases appraisals are made of the probable sufficiency of calories furnished in the dietaries but without a full analysis of other elements in the diets. Mention has already been made of the appraisal in Sir John Orr's study of the food consumed by the population of Great Britain.

An alternative method of appraisal should be mentioned. When

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1 The London standards established by a Technical Commission of the Health Committee of the League of Nations which met in London in November 1935, and since amended, are the most widely agreed-upon standards; see *International Labour Office: Workers' Nutrition and Social Policy*, pp. 5-7.

2 The extent to which the London standards, which are applicable for Europe and North America, are valid for the Far East is not known accurately. It is established that physiological requirements vary with climate, body size and activity, for which adjustments may be made, and possibly that requirements also differ according to race and the adaptation of the digestive process to customary dietaries. There are even differences in the chemical composition of the same foods produced in temperate and tropical countries. The Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene in 1937 reported that: "It is at present difficult to define standards which will be useful and applicable throughout the East", but adopted general dietary recommendations, such as that the inclusion of some animal protein in the diet is desirable. The Committee of Technical Experts has recommended further research in the problem of standard and actual dietaries, the state of nutrition, and the composition of foodstuffs peculiar to the Far East, and allied problems (Nov. 1937). Working standards for various Far-Eastern countries are contained in the *Preparatory Papers of the Conference on Rural Hygiene*. Most of these reports contain budgets of foodstuffs providing "sufficient" protein, fat, and carbohydrates, sometimes minerals, and occasionally vitamins. More attention has been paid in those countries to the carbohydrate, protein and mineral content of foods than to their vitamin content. Cf. *League of Nations, Health Organisation: Preparatory Papers of the Intergovernmental Conference of Far-Eastern Countries on Rural Hygiene*.

information on the expenditure for food but not quantities consumed is available, the food expenditures can be compared with the estimated minimum cost of a standard diet which satisfies normal requirements of various foods. This procedure in general underestimates the proportion of cases of deficient dietaries, since the assumption is made that families with a food budget equal to, or in excess of, the minimum actually obtain a diet equal to the standard—in other words, the assumption is that the most economical selection of foods is made by the housewives. Standard diets, with their costs, have been prepared in many countries for purposes of setting minimum wages, relief allowances, etc.

(3) General Statistics on Nutrition

Another approach to the problem of the adequacy of food or nutrition among the working classes is through general statistics of malnutrition or of the prevalence of deaths or cases of specific diseases associated with diet deficiencies.

Surveys of malnutrition. — A great deal of work has been done on the problem of surveying the extent of malnutrition in the general population or in specific groups and particularly among school children. Methods have been developed with reference to the best way of selecting cases where malnutrition may be inferred from the relation of weight to height or other physical measurements, the selected children or selected persons being then given a detailed medical examination to ascertain the presence or absence of malnutrition. Such tests based upon measurements usually have to be supplemented by physical examinations in which clinical evidence or clinical tests are relied upon to demonstrate the condition of malnutrition.1

With regard to the prevalence of malnutrition among working classes and the families of wage earners, it is difficult to obtain general evidence. For the most part evidence of prevalence of malnutrition is not related specifically to wage earners or to wage earners' families. However, since in general wage earners and wage earners' families form a large proportion of the total population and since, further, other things being equal, the more well-to-do

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classes tend to have a smaller proportion of malnutrition than wage earners, the proportion of malnutrition found for a population as a whole usually understates the proportion found among wage earners and wage earners’ families. On this general basis, the evidence of the extent of malnutrition in the population may be used as indicative of the minimum prevalence in the group with which the present Report is particularly concerned.

Mortality and morbidity statistics. — A second source of evidence on the prevalence of malnutrition is the statistics of death rates or specific diseases associated with diet deficiencies. These diseases include for example beriberi, rickets, pellagra, scurvy, osteomalacia, etc. Especially in the Far East studies have been made of the incidence of these diseases. Beriberi is commonly related to the consumption of polished rice. Pellagra is found in the southern part of the United States, in parts of Italy, though much less than formerly, Rumania, etc., and in the Far East and is usually to be associated with a limited diet with the absence of a specific vitamin or protective substance. For the most part these deficiency diseases, where they have been identified, can be corrected by relatively simple means. For example, beriberi can be prevented by the substitution of unpolished for polished rice, rickets by the addition of cod liver oil (or certain other substances) to the diet or by exposure to sunlight. To a large extent, therefore, the prevalence of these deficiency diseases may be attributed to ignorance as well as to the economic factor which plays a part.

Besides the death rates and sickness rates from specific diseases associated with deficiencies in the diet, high death rates and high prevalence of sickness from other diseases may be due to or favoured by malnutrition, the resistance of the individual being so reduced that he falls victim to diseases which in good health he might have been able to throw off. Evidence of the extent to which this is generally true is difficult to bring. One disease, especially common during the productive ages, where this is an important factor, is tuberculosis. Interesting evidence of the connection between tuberculosis and under-nutrition is shown by the increased prevalence of tuberculosis in Germany during the period of the world war, when food consumption was restricted.

B. Housing

A second major element in the family budget is housing or shelter. From the point of view of any given family, housing must satisfy three types of requirements. It must: (a) provide protection against weather, etc.; (b) be adequate for the family, regard being had to its size, age and sex composition; and (c) be at a rent which the family can afford.

(1) Standards of Housing

Standards of housing might be set up for each of these three requirements: standards governing the physical aspects of the house, standards governing overcrowding and segregation of the sexes, and standards of rental.

In respect of the condition of the house, standards may be established on three main bases—on a basis of safety as against fire or collapse; on a basis of health, either of protection against a specific disease or diseases or protection or promotion of general health; and on a basis of comfort, where provision of running water, hot water, central heating facilities, etc. (so far as these are not included within the scope of health), may form part of the standard. Standards of the first two classes, those for safety and health, are commonly established by legal regulations, such as those governing demolition of below-standard and condemned houses, or those governing the construction of new houses. In cases of the third type, affecting comfort, they are usually in the form of norms agreed upon by experts for purposes of appraisal.

In practice, standards as set up in legal regulations or recognised by official bodies vary greatly from place to place and from country to country according to conditions. As an example, housing standards relating to health conditions may be considered. Regulations for the control of specific diseases are important only where the specific diseases are prevalent; as examples may be mentioned rat-proofing of the house as a measure against the spread of bubonic plague, the abolition of packed earth floors—a regulation important

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1 Most countries have laws providing detailed regulations in regard to the construction and use of buildings. In general, the more specific rulings are left to the local authorities. Statutory provisions of this type deal with zoning, the size of buildings, construction for fire prevention, sanitation, light and air, disposal of sewage, etc. More general standards may be drawn up for the preparation of local housing regulations; for instance, in the Netherlands there have been published under the auspices of the Public Health authorities guides for the preparation of housing by-laws, containing quite specific provisions, such as the ratio of window space to floor area.
for the prevention of yaws, and various measures relating to the sanitary disposal of sewage for prevention of typhoid, dysentery, hookworm, etc. Standards for the promotion of general health cover the sanitary disposal of sewage, a safe water supply, and such conditions as will promote cleanliness and a sufficiency of light and air. All modern cities have faced the problems of sewage disposal and the provision of safe water supplies; though in practice, because of the lag in requiring installations in old houses in some cities with up-to-date sewage plants and waterworks, individual houses may be found without sewer or water connections. In rural areas, on the other hand, the problem of sewage disposal may be met in practice in a great variety of ways, conforming either to no standards at all or to standards of varying degrees of excellence.

The Housing Commission of the Health Organisation of the League of Nations is studying not only the problems of standards for hygiene of housing but for comfort of environmental conditions as well (such as temperature, moisture content, and movement of the air) \(^1\). The results of research in light and heat and air change requirements, noise, and similar subjects carried on by national committees have been brought together by the Committee. This work is intended to lead to “the definition, for various climates, customs and regions, of standards of what may be termed healthy urban and rural housing and healthy town and country areas” \(^2\).

In the reports of the national committees valuable materials relating to housing standards, sometimes of wide application, sometimes relating only to local conditions, often with extensive bibliographies, are found. A comprehensive report on the “Basic Principles of Healthful Housing” prepared by the Committee on the Hygiene of Housing of the American Public Health Association attempts to formulate “the basic health needs which housing should subserve”, together with the specific requirements and methods of attainment. The thirty basic principles “are believed to be fundamental minima required for the promotion of physical, mental, and social health” and include such principles as: “Maintenance of a thermal environment which will avoid undue heat loss from the human body”, and “Provision of adequate privacy for the individual”.


Housing standards as thus formulated vary widely, partly because they are evolved with the idea of amelioration of conditions, and partly because needs differ with climates, the prevalent types of disease, and other factors.

Standards for various regions in the Far East are found in the papers of the League of Nations Far-Eastern Conference on Rural Hygiene, in the judgments expressed in the descriptions of existing housing, in the discussion of the improvements being made by the authorities, and in the recommendations regarding the control of specific diseases. These standards usually relate primarily to sewage disposal, sometimes also to light, air and crowding, and to construction such as to make it easy to keep dwellings clean. The standards in these reports are expressed in rather general terms, such as "a satisfactory development... in the increased installation of bored-hole latrines". But in the Far East standards are largely a matter to be evolved by local health and other authorities. The Far-Eastern Conference recommended specifically in regard to housing that kitchens should not be inside the living part of the house and that cattle-sheds should be detached; beyond that, however, it recommended that the Eastern Governments constitute committees for small-village planning, to set up local standards dealing with details regarding siting, types of houses, building material, ventilation, lighting and heating, waste disposal and water supply.

Standards of a sort for housing in Europe and North America are numerous and frequently detailed. Between the extremes of the two types of standards, one expressed in terms of objectives (such as sufficient light and air) and the other expressed in engineering specifications, there is a wide range.

Other standards of the physical aspect of housing may be based upon ideas of comfort or social well-being. For example, the International Labour Office, for purposes of its rent investigations in different towns, has set up a scale of qualitative standards by which workers' dwellings may be rated, taking into consideration the type of building in which the dwelling is situated, and the installations of water, toilets and bathrooms.

Standards of occupancy include those relating to overcrowding

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in general and in particular those relating to the provision of adequate bedrooms. The most common type of standard for overcrowding is measured by the number of persons to a room. The various definitions used in different countries are presented in a report of a sub-committee of the Committee of Statistical Experts of the League of Nations; the most usual definition is that families are considered overcrowded when there are more than two persons to a room. This standard is adopted by the International Labour Office for its comparative study on overcrowding in different countries made in its report on housing policy in Europe. A discussion of measures of density of occupation, such as number of persons to a dwelling, or persons to a room, or rooms to a person, and more detailed scales, is found in the International Labour Office's Methods of Compiling Housing Statistics, published in 1928.

Here again, standards which bulk large in appraising the quality of housing in Europe may not be relatively so important in other countries on account of different conditions. The standards for housing in terms of space, the most common for Europe, are of only secondary importance in many tropical countries. A report for Siam states that "there is no question of overcrowding in rural Siam"; a report of the Netherlands Indies Public Health Service states: "On account of the climate and manner of living in this country the factors of floor space and floor area per inhabitant are less important, so far as housing problems are concerned, than in Europe.

After measures of simple density of occupation come those for the separation of the sexes. In the United Kingdom the standard adopted by the Ministry of Health considers a dwelling overcrowded if the number of persons sleeping in the house is such that any two persons of different sex, ten years old or more and not living together as husband and wife must sleep in the same room, and by combining the sex separation and density standards based on number and area of rooms, schedules of the standard of capacity of dwellings of different sizes are prepared. Similarly, in a

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3 Ibid., III, p. 104.
report on overcrowding in the Netherlands, it is considered that children of different sexes over 12 years of age should have separate bedrooms. Standards of rentals for housing are of limited extent, and in general are to be found only in connection with public works projects for slum clearance, for construction of workers' dwellings, and similar works of social policy.

In summary, these housing standards may be characterised as of varying levels and of varying degrees of urgency. In general a standard applicable to a particular area or community, if adopted as a matter of legal regulation, sets a minimum which all dwellings within the community should satisfy, and the presence of dwellings which do not conform represents a deficiency in housing which is more or less serious, depending upon the character of the standard violated. While the type of minimum standards in force in a community affords insight into its relative position with regard to housing, it is far from affording a sufficient basis for a general appraisal of housing facilities; this must be done in the light of all the evidence available.

(2) Statistics of Housing

In general there is a considerable amount of statistical data on housing for most countries in Europe (except the Balkans), for the British Empire, and for the United States. In most cases general censuses of dwellings are taken at the time of the census of the population and cover either the entire population or, as a minimum, the urban centres. In many countries these are supplemented by special enquiries made in selected cities.

The statistical data available for appraising housing in the different countries will be considered briefly under three topics, (1) occupancy and overcrowding, (2) the health, safety, and comfort aspects of housing, and (3) rents, etc.

(a) Occupancy Statistics

In many countries the census statistics of housing are available for the whole population (Canada, Italy, Netherlands, Norway, Poland, United Kingdom and Switzerland), showing the size of families in conjunction with the number of rooms occupied, thus

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giving the basic data needed for a classification of population according to density of occupancy of dwellings.

These data permit classifying the population (but not always the wage-earning classes) according to the average number of persons per room, and with this information the proportion of the population living under conditions of occupancy exceeding any given standard of density, such as two persons per room, can be determined. Even where the detail by size of family is not available, a simple classification of the number of dwellings by the number of rooms shows as a minimum the number of families living in one room, a point which is itself of considerable interest.

Besides these, figures based on census data for urban areas only are available for certain other countries (e.g. Czechoslovakia, Denmark, France), or as a result of special enquiries as in Germany, Sweden and the United States.

The precise significance of all these figures on density of occupancy, however, depends in part upon other points. The density of occupancy has been studied, especially in certain countries, for example, Germany, Great Britain, Norway, and Sweden, by means of more detailed criteria in which age, sex, and marital condition are taken into account. In certain cases in special investigations the size of rooms (area or volume) is utilised. This is done, for example, in a first enquiry into “Workers’ Dwellings in Different Cities”, the results of which were published in the *International Labour Review*, Vol. XXXIV, No. 5, November 1936.

A general survey of international statistics on these points is contained in reports of the International Labour Office on housing policy in Europe and in the reports on the results of studies in the field of housing published in the *International Labour Review*.

In close connection with these statistics of occupancy, the question of sharing the dwelling with one or more persons outside the family or with other families is important from various points of view. The cases of sharing a dwelling include many different kinds of cases: for example, the family may have chosen to let rooms as a method of meeting their particular requirements; in other cases the family is forced to do so by economic necessity or because of the absence of dwellings corresponding to its needs. Likewise, the cases of sharing rooms correspond to a great variety of conditions.

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1 In some countries the number of supplementary rooms not counted as “habitable rooms” is taken into account. In certain cases, figures showing the number of occupants of each sex, age, etc., are available, though not utilised in calculating the figures for density of occupancy.
from the boarder not related to the family but included in the household as other members of the family to the case of two or more families arranging their lives separately and as comfortably as possible in the same dwelling. In the countries where the statistical analysis takes these points into account—for example, Germany, Canada, Great Britain, Poland, Czechoslovakia, Sweden, etc.—there are great differences in the methods and scope of the data.

(b) Physical Characteristics and Equipment of Dwellings

The censuses and enquiries of certain countries, especially those of Denmark, the United States, Italy, Norway, Poland, Sweden, Switzerland and Czechoslovakia, give various details on the type of dwelling. These data on what one may call in general terms the quality of dwelling cover a wide variety of specific points—which can be classified in two main groups:

(a) those relating to the character of the building in which the dwellings are found, that is, the number of storeys or the number of dwellings in the building, or distinguishing between single family dwellings and apartment houses, or according to the material used in construction, the date of construction, or the state of their upkeep;

(b) those concerning the comfort of the dwellings as judged by presence or absence of bathrooms, toilets, with and without running water, hot and cold, the heating system, electricity or gas for lighting or cooking, the availability of a small garden, etc.

Among the countries with information on these points may be mentioned: Czechoslovakia, Denmark, Italy, Poland, Sweden and the United States.

The data on housing for the working classes are available in certain countries, especially Denmark, Italy, Norway, Poland, Sweden, Switzerland and Czechoslovakia, where the censuses and enquiries furnish analyses distinguishing the social groups to which the head of the family belongs. The criteria by which these groups are distinguished may vary from country to country, for they depend, in general, on the industrial or occupational classification adopted in the general census. In these countries, also, housing conditions are analysed separately as between urban centres and rural areas.
(c) Rents, Tenancy and Home Ownership

(i) Rents

General data on rents, which are particularly interesting for comparison with the incomes of the tenants, are available only in a very small number of censuses and enquiries, principally Canada, Denmark, the United States, Sweden, Switzerland and Czechoslovakia. Family budget studies, however, available for most important countries but based upon small samples of wage-earning or other groups, usually contain data showing the proportion of the expenditure that is spent on rent or housing, classified by income groups. It is true that because of the delay between the taking of the censuses and the publication of the results, the data on rents collected by this means are often somewhat out of date at the time they are published. Index numbers of the cost of living set up in the majority of countries offer an occasion for obtaining returns periodically. Such data are obtained under conditions which do not permit publishing the absolute figures, with the result that, in general, only index numbers are available.

(ii) Home ownership

In close connection with rents, the question of home ownership is pertinent. At present such data are available in censuses and enquiries of certain countries, especially Canada, Denmark, the United States, Italy, Sweden, Switzerland, and Czechoslovakia. In certain of these countries, a classification is adopted that permits of distinguishing homes owned from those being purchased on time payments or on rental purchase plans. Special data are also available on the number of cases of tenancy on the basis of services rendered—for example, door-keepers, concierges, etc.

Besides the documentation already discussed, there are, in certain countries, various official reports or private studies which throw light upon existing housing conditions. It would perhaps be going too far afield to make even a summary of these documents in this connection. For the countries of the Far East mention may be made of the Preparatory Papers of the Intergovernmental Conference on Far-Eastern Conditions of Rural Hygiene, already cited, which furnish for most countries information on the general character of dwellings, the way in which they are inhabited, the materials used in their construction, and the type of roof. These data are evidently much more general than those available for
Western countries, but they nevertheless allow a first view of the most important problems in these countries.

C. Clothing

A third essential component of family expenditures is clothing. The requirements which clothing must satisfy include protection against the elements, etc., and conformity with standards of decent covering common to the community. In addition, clothing should provide aesthetic satisfaction, etc.

(1) Standards

Standards for clothing for purposes of appraising levels of living of wage earners' families in different countries and in different communities are difficult to establish. They must vary obviously with external conditions to take account of differences in climate, etc. Community attitudes also are an important element in such standards, both in regard to what is required by standards of decency and in relation to habit and fashion. The customs and traditions of the group are usually decisive in regard to certain minimum requirements. In addition to these minimum requirements social standards of appearance may determine what should be worn to work. The clothing requirements for a manual worker are different from those for a clerical occupation. Social standards are important also in determining clothing requirements for children attending school. Apart from these, fashion, social custom and tradition are potent influences in determining what shall be worn and under what conditions. To a large extent these influences determine all the so-called "upper levels" of clothing standards, but, as just mentioned, occupation and school attendance also have an influence when they affect the clothing requirements of wage earners' families.

Finally, health plays a part in certain aspects. The wearing of shoes, for example, in regions where hookworm prevails is an important preventive measure. Sufficiency of clothing for protection against cold may be regarded as essential in the interests of good health. For present purposes, that is, for a study of the clothing requirements or standards of wage earners' families, certain types of standards set by fashion or social custom may be regarded as outside the scope of the present discussion.

An approach to a series of specific standards which may be utilised for purposes of appraisal may be found in specific quantity
budgets of clothing established for arbitrarily determined or designated levels of living. These studies indicate the quantity of each type of garment required for families of each different size and composition at the so-called "relief" level (as set up for purposes of determining relief payments), or at a level appropriate for determining minimum wages, or at a minimum comfort level.

These standards represent not so much standards generally agreed upon as the views of individual experts on what a family will require in the way of clothing at a particular economic and social level. Furthermore, the clothing actually purchased (or regarded as necessary) by the highest economic group of wage earners may be considered as a standard which wage earners at lower levels of living would like to attain.

With special reference to certain possibilities of improving standards, consideration should be given to physical and economic qualities of clothing, for example, expense, durability and the capacity for retaining warmth. Reductions in cost for identical wearing qualities or improvements in quality without increased expense may make possible, other things being equal, a higher level of living in respect of clothing.

(2) Statistics

The principal source of data on clothing is family budget studies. These show in practically all cases the proportion of family expenditures which is spent for clothing. The significance of these data is limited in two respects; (1) in that the exact definition of clothing differs in the different studies; for example, as to whether or not laundry is included; and (2) the absence in some cases of data on the number, age and sex of the persons for whom clothing is purchased. Obviously no attempt can be made to determine whether the clothing allowance is adequate without reference to the composition of the family. In some cases expenditures are shown per consumption unit, in which the composition of the family is given in terms of the unit, which, however, is usually based on food

1 See, for example, Rowntree: Poverty. A Study of Town Life. See also, Factors to be Considered in Preparing Minimum Wage Budgets for Women, prepared by Economics Division, U.S. Bureau of Home Economics, Department of Agriculture, in co-operation with the Women's Bureau, Department of Labor; also Stecker, Margaret Loomis: Intercity Differences in Costs of Living in March, 1935, 59 Cities; preliminary report, Division of Social Research, Works Progress Administration, Washington, 1937.

2 See note in section on "Food" for references to summaries of reports on family budget studies.
requirements, though, in a few instances, on relative clothing costs. In a survey of wage earners' and clerical workers' expenditures made recently by the United States Bureau of Labor Statistics, the relative expenditures in each group were analysed for persons of different age and sex. Detailed data on the types and materials of garments, prices, and the season of the year when purchased, were obtained for each member of the family. In certain other enquiries, certain details of clothing according to the age and sex of the family members are available.

When data exist showing the actual garments purchased for the different members of the family, the basis is given for an appraisal of the level of living in respect of clothing. A substitute for these data is evidence showing the per capita expenditure for clothing in relation to the cost of a standard budget for clothing in the particular locality, since with such a basis for comparison the conclusion can be drawn whether the clothing budget for the individual family equals or exceeds or fails to equal the amount adjudged necessary. Such analyses where available are usually in the form mainly of data showing the actual amount of money per unit available for clothing; and the number and proportion of families with classified amounts of clothing budgets. Such material is naturally limited to the materials collected in family budget studies. No comprehensive data are available on the general adequacy of clothing budgets for working-class families.

D. Miscellaneous

Finally, some consideration should be given to the group of miscellaneous items in the family budgets in which may be included, for present purposes, all items except those for food, housing and clothing. For present purposes special importance attaches to this group, since many students of family living have considered the percentage of expenditure allocated to miscellaneous items as a rough index to the level of living. The larger the expenditure on miscellaneous items, the higher the standard. There is, of course, this justification, that with larger incomes there exists normally a greater freedom and not only can more and better food be purchased, more and better housing, more and better clothing, but various other minor wants can be met, leading to a larger proportion of the income being devoted to non-essentials and luxuries, thus indicating a "higher" standard of living. This conclusion is not true, however, without certain reservations;
in particular, the reservation that the food purchased (for example) is not skimped in order to make possible larger proportionate expenditures for some one or other more miscellaneous items that are deemed, in the particular case, to be more important than food.

Standards of miscellaneous expenditure are even more difficult to establish than standards of clothing. Two types of standards may be considered: (1) those based upon proportionate expenditures; these standards are supported by family budget studies indicating the increasing proportion of income devoted to miscellaneous expenditure as income increases; and (2) those based upon an attempt by experts in family budget studies to set up standards in respect of the amount or presence of certain more or less typical items of the miscellaneous group in the actual wage earner's budget. That budget includes both necessaries as well as luxuries; in the former may be cited soap, car fare to and from work, etc.; in the latter would be included such items as "amusements", a wireless set, telephone, or even a motor-car. Obviously both the items covered and the amounts provided in the budget would bear relation to the particular level of living concerned. Such standards may be found in quantity budgets set up by experts for specific levels of living.

Percentages spent on miscellaneous items are given in the various family budget studies. In this case also, variations in the average of the group affects the significance of the differences in percentages.

Data on the presence of specific items, together with the amounts or proportions expended on them, are also available in certain family budget studies and throw light therefore, so far as the character of the item can be utilised as an index of the level of living, upon the standard of living in the families covered. Family budget studies must be regarded as the principal source of information on expenditures of this type.

General data, however, on the prevalence of specific items are in some cases also available, but these are for the most part fragmentary. However, information is usually available on the number of wireless sets and the number of telephones in most countries, though not usually indicating the type of family, whether wage earners or others, which possesses them.

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1 Without necessarily attempting to label or fix exact percentages for different levels designated as poverty level, minimum comfort level, etc. See below, p. 58.
2 See note in section C on "Clothing", p. 47.
3 See note in section A on "Food and Nutrition", p. 33.
III. — Social Elements in the Standard of Living

Important elements in the standard of living are dependent not only upon the expenditures of individual families but also largely upon community action. Examples of these are health, education and social services. True, in many families expenditures are made on health (doctors' bills, medicines, hospital bills, etc.), on education, such as private school fees, tuition, etc., and in some cases these expenditures form an important proportion of the total family budget. In the main, however, and among the working classes especially, the level of the standard of living in respect of health, education and social services is dependent upon community or State services supplied free of cost. In regard to health, the burden of the provision of medical services is for the most part taken care of through various forms of social insurance; for the rest, free community services such as hospitals, etc., may be provided. A minimum of education free of cost is provided for in most countries by the community. This minimum varies from place to place or from country to country, depending upon the traditions of the various countries and how much of the public funds can be devoted to these purposes. But the degree of public health protection enjoyed by a community and the degree of educational facilities provided free form such an important part of the standard of living enjoyed by the working classes that some discussion of these topics is essential to an adequate picture of living standards. In this section, therefore, three topics will be discussed briefly: health, education and social services.

A. Health

With regard to the wage earner, it is particularly true that good health is a condition of maximum earning power. The dependence of health, in part at least, upon economic conditions has long been known. Infant mortality has often been described as one of the most sensitive indices of social and economic conditions, though perhaps more so in the past in areas where conditions were especially bad, than now when many connections between disease and low economic conditions have been severed. The close relation between economic status and mortality has also long been recognised. The idea that "public health is purchasable" has been effective in promoting increased appropriations in many commu-
nities for protection against disease. Many examples can be cited of the effectiveness of the introduction of specific measures in terms of decreasing death rates, for example, the relation between the diminishing typhoid fever rate and protection of water and milk supplies; the decrease in prevalence of diphtheria with the measures taken for immunisation of susceptible persons; the fall in tuberculosis mortality, etc.

In so far as the evidence available on the state of health among the working classes and on the possibilities for its improvement are concerned, two lines of enquiry may be referred to: first, the expenditures for health and medical services by working-class families or on behalf of the working classes and, secondly, disease and death rates among workers and their families.

**Expenditures for health and medical services.** — Family budget studies of workers' families show small amounts expended for medicine, doctors' bills and other health aids. These expenditures are for the most part small in proportion to the total expenditures. Further, they bear no relation to health, but rather to ill-health, nor are they specially significant of the general level of health. They show merely that in certain families expenditures must be made for these purposes. In regard to health, the principle of insurance is particularly applicable. The incidence of sickness in a particular year is not uniform, and hence the actual expenditures in an individual family or for an individual case are not indicative of the general level of living. The fact that regular provision for sickness insurance exists is important. But since social insurance plans provide for only a small part of the health services which are to the advantage of the worker, even such expenditures are not specially significant for the present purpose.

In some countries general surveys, or surveys based upon large samples, have been undertaken to determine the extent of sickness in different groups of the population and to show the amounts expended for medical services and other health items; in particular the extensive studies in the United States made for the Committee on the Costs of Medical Care may be cited, as well as the studies now under way of the prevalence of sickness in a number of cities.

**Disease and death rates among workers and their families.** — The second line of enquiry is into the death and disease rates among workers and their families. In practice, reliance must be placed for the most part on death and disease rates for the general population. Since the workers form the largest proportion of the
population and since in general death rates and disease rates are higher among workers than among the rest of the population, the figures for the general population can be used as an indication of the rates among workers.

This is not the place to attempt to survey in detail all the sources of information on this subject. It is enough to say that in all modern industrial countries adequate statistics of deaths and death rates are available. Besides the general death rate as an index of healthfulness, which certainly has to be corrected so as to make allowance for the variations in the age and sex composition of different populations, special attention should be paid to the infant mortality rate and the death rates from certain diseases associated with poverty or malnutrition—for example, tuberculosis. So far as special rates for occupational diseases are concerned, comparatively few countries have any adequate material on this subject. Great Britain, which publishes analyses of occupational mortality every ten years, is practically the only country with data showing the relation between occupation and mortality, though a first study of occupational mortality is available for the United States.

B. Education

Granted that at least an adequate elementary education is an important determinant of the standard of living of the working population, a variety of data is available to throw light on the question of the degree of such education enjoyed, if not by working-class families, then by the population as a whole.

In the first place, the degree of education received can be tested by the results. A minimum education should permit of reading and writing in some language. Statistics of illiteracy are collected less frequently than data on school attendance, but are available in the censuses of a number of countries and show the extent to which the population of those countries is able to read and write. All the countries of Western Europe have small percentages of illiteracy. In the United States in certain groups—Indians, foreign-born, Negroes—substantial proportions of illiterates are

found. In the U.S.S.R. a considerable proportion of the older age groups especially are illiterate. In certain countries, such as India or China, extraordinarily large proportions of the population are unable to read and write.

Other sources of information on the amount of education available are data on the number of schools, the number of qualified teachers, the number and proportion of children of each age attending school, and the number of persons attending high schools, universities or other institutions of higher learning. Finally, statistics of the amounts of money spent by Governments on schools furnish another source of information.

C. Social Services

Apart from health and education, perhaps the most important aspects of living standards which are dependent upon group activities are the social services, including arrangements for social insurance of all kinds—accident, sickness, unemployment, old-age pensions or insurance, together with relief and all related activities. All these are in the nature of services which are necessary if the individual falls into the group of those in need, and are of great value in any case since he knows that if need arises the services are there to take care of him and his family. In the absence of such social services the individual either has no provision at all or else he is forced to make provision by his individual efforts, which in most cases means that little or no provision is made.

So far as the extent of these services is concerned, reference may be made to the comprehensive survey contained in the International Labour Office publication, International Survey of Social Services, 1933.

IV. Problems of Evaluation

The account given above of the material available on standards of living has shown that a large amount of information exists on this subject, but that considerable gaps remain to be filled if an adequate picture of workers' living standards is to be drawn. It has also shown that the material available is heterogeneous;

any attempt therefore at evaluation of standards depends on the elaboration of methods for the use of the existing material. In view of the common tendency to discuss living standards in general terms, and to compare them both as between different dates and between different groups or different countries, brief consideration is given in this section to the problems involved in such evaluations.

A. INTRA-NATIONAL TIME AND PLACE COMPARISONS

There are, as indicated above, two ways of comparing standards of living within a country, which may be briefly referred to as time and place comparisons. In the former, the standard of living of the population of a country or of certain groups of the population are compared at one period with that in another. These are perhaps the most frequent, and also the easiest, comparisons to make. Thus it is often said that the standard of living has risen by so much in the last 50 years, or since 1914, or has fallen by a certain amount since 1929.

Many national enquiries have been made into the changes in the standard of living of the workers, and it is not possible to give an enumeration of all those which have been published 1. The method usually adopted in these enquiries is to measure the changes in the incomes of the people and, at the same time, the changes in the cost of living. The cost-of-living changes are usually measured by computing the changes in the cost of an unchanged set of goods and services, as shown by family budget enquiries. If money wages have increased more than the cost of living, it is held that real income and hence the standard of living have risen; and the same is true if wages have decreased less than the cost of living has decreased. In the contrary case, real income and the standard of living are said to have fallen.

Such methods, as will be clear from the arguments of Chapter I, do not necessarily give an exact picture of the changes in standards of living: they ignore various factors, especially those relating to free services, working conditions, etc., and changes in the size of the family. However, as these factors change slowly within the same country, this method of comparing changes in money incomes with changes in the cost of living and thus compiling what are

1 Reference may be made however to Dr. A. Bowley's study on *Wages, Prices and Income since 1860* (London, 1937) and to the monumental *New Survey of London Life and Labour* (9 vols., 1932-1938, London).
known as index numbers of real wages and real incomes, has been widely adopted.

For "place comparisons", i.e. comparisons of standards of living at the same period among different localities or occupational groups, the methods are not so simple. Within a country, comparisons are frequently made between workers in different occupations or in different towns, or between different categories of workers (according to skill, sex, etc.) by methods similar to those used for making comparisons in time. Provided the milieu or habits of the different groups are similar, such methods are justified. In the case of comparisons within the same country, the advantages of free services, etc., may be assumed to be the same for different categories, and the comparison of real incomes would then give an approximate measure of the relative standards of living for families of similar type.

B. INTERNATIONAL COMPARISONS

The other form of place comparisons is that of comparing standards of living between two different countries within the same period of time. In this case considerable difficulties arise, which can only be commented on briefly in this preliminary Report. It has already been pointed out that it is not quite accurate to speak of the standard of living of a country; there are many standards, appropriate to different groups and categories. International comparisons can therefore be made more accurately for particular groups of workers and classes of population.

Even if the question is thus restricted, there are further difficulties. In intra-national comparisons it is assumed that tastes, habits, climate, etc., are the same, or approximately so, for the different categories or periods covered. This cannot be assumed for international comparisons, nor can it be assumed that what are described as "free services", etc., have the same determining influence on the standard of living. Where habits of life approach each other in two countries, such comparisons may be attempted, but the greater the difference between the milieu, the more difficult it becomes to give an answer. The elaboration of methods for such comparisons is an important task to be pursued 1.

1 For a further discussion of this problem and its application to one particular category of worker, see INTERNATIONAL LABOUR OFFICE: A Contribution to the Study of International Comparisons of Costs of Living. Studies and Reports, Series N, No. 17, 1932.
C. Other Methods

While continuing to regard income and expenditure as among the chief determinants of the standard of living, attempts have been made to find criteria other than those of differences in purchasing power, or real incomes, for evaluating standards of living. The percentages spent on different items such as food, clothing, rent and miscellaneous have sometimes been used. It has been often pointed out that, as income rises, the percentage devoted to food falls and that spent on items other than the chief necessaries of food, shelter, etc., increases. Other criteria have been occasionally used, such as the death rate, the infant mortality rate, the expectation of life, or even the consumption of some particular commodities. There is a number of difficulties in such procedures. A series of such indexes could not be reduced to a common denominator, and the importance of each criterion would vary as between different groups and different periods.

International comparisons of standards of living are of importance in relation to questions of international competition and migration; in some cases the migration policy of a country is based on the alleged lower standards of living of certain races or nationalities. But it is not possible to go further into this matter in this preliminary Report.

D. The Measurement of Deficiencies

Apart from the problem of comparing actual standards and of measuring changes in standards is the question of how deficiencies in living standards can be measured. This problem is of greater practical importance for social policy. Two questions are involved: first, how can deficiencies in living standards be gauged; and secondly, by what methods can it be determined whether standards of a given group are being raised or lowered.

Norms

As was indicated in Chapter I, one approach to these questions is by way of norms elaborated by physiologists, hygienists, housing specialists and others. Such norms set either an optimum or a minimum limit in the light of which existing conditions can be judged and on the basis of which policy may be shaped. In other words, if there is a gap between what a family or a group of the population actually consumes (in the way of food, clothing, housing, etc.) and what is set up as a "norm", this may be regarded as a
deficiency which would need to be corrected if the standard of living of the family or group is to be improved.

This method of evaluation—on the basis of norms—has been gaining ground rapidly in recent years. It is certain to be more and more widely applied in years to come as the various sciences dealing with nutrition, health, and human needs in general continue to make progress.

Nevertheless, for the time being, and in the near future, evaluation cannot be made on the basis of norms only. The main reason is that the elaboration of norms for many elements of consumption is difficult and slow. There are disagreements among specialists which are not likely to disappear entirely. Besides, as shown above, some norms can be expressed in definite quantitative terms while others involve qualitative judgments, which are more uncertain. The whole subject is still in its early stages of development and much more progress will have to be made in this field before any attempt to set up a model standard on the basis of norms can be made.

Standard Budgets

The other main method available is that which has been followed by investigators for many years. That is the method of setting up standard budgets for population groups at different levels of income. Such standard budgets, expressed either in terms of quantities of goods and services or of their money costs, have been used in the fixing of minimum wages and for other economic and social purposes. In practice, the number of such standard budgets recognised in any one country has varied from time to time. It would seem that there is a tendency to accept three levels of such budgets for the working population, namely (1) a subsistence level; (2) a decency level; and (3) a comfort level.

It is obvious that in the setting up of such standard budgets, the differences in the economic and social conditions of various countries cannot but play a large part. Also, the setting up of such budgets may be affected by cultural and political considerations. But a certain degree of uniformity of method is achieved owing to the fact that in most countries the tendency is to regard the actual level of living of the common labourer as the subsistence level and the level of living of the skilled worker as the decency or comfort level. As a result, it is possible to draw a poverty line which lies below or near the subsistence level, and thus to grade the population of a country into four main groups of (1) those
below or at the poverty line; (2) those on a subsistence level; (3) those on a level of decency, and (4) those at the comfort level.

National Minima

It seems logical that for purposes of social policy, the two methods outlined above should be combined. As norms of nutrition, housing, clothing, etc., are elaborated, they can be applied in setting up and in computing the costs of the standard budgets at the four levels indicated. Thus, there is a progressive tendency towards greater objectivity in the whole process of judging family living standards. The method outlined may be called that of setting up national minima at different levels (a subsistence minimum, a decency minimum and a comfort minimum).

The above method provides a basis both for the evaluation of levels of living and for the making of policy. The living conditions of a single family or of a group of families in any country can be compared with any one of the three national minima and appraised on the basis of such a comparison. The main problems of social policy to improve the workers’ living standard can be more precisely defined in terms of what is proposed, namely whether it is a question of (1) lifting persons below the poverty line to a subsistence level, or (2) of improving the content of living at the subsistence, decency or comfort level.

E. Norms, Standards and "Freedom of Choice"

In this connection there arises the question, already briefly referred to, of the relation between norms, standard budgets, tastes and habits. In general, this is the problem of freedom of choice in determining the distribution of family expenditures. The problem arises owing to the fact that tastes and habits may not coincide with the requirements of norms or with the allocation of the family income to the different items in a standard budget. In deciding upon the way in which the family diet is to be made up, a housewife may arrange her money expenditures, not with a view to securing amounts of protein or calories or vitamins, but with a view to satisfying specific tastes and habits. Such a divergence may persist even on the assumption that those who set up norms make every reasonable effort to take into account known habits and tastes. It is argued that any attempt to base consump-

1 See Chapter I, p. 12.
tion on objective norms would be in disregard of tastes and habits and would be a limitation of "freedom of choice". The importance of the problem lies in the fact that freedom of choice and ability to gratify tastes are prized in themselves and are regarded as an element of welfare.

The answer to this question depends upon a consideration of the several levels of living distinguished above. When the problem is one of lifting a family or whole group of the population above the poverty line, there can hardly be a question of freedom of choice. The deficiencies are of such an elementary character and the needs are of such a simple physiological character. On the other hand, when planes of living are already at a fairly high level, when for instance food is at least sufficient in quantity and variety to meet minimum physiological norms, and housing and clothing serve with some degree of adequacy their most obvious physiological functions, the problem becomes more real. In other words, freedom of choice gains in importance with increasing family income and on higher living levels.

One way of meeting this problem has already been suggested, namely that a large number of composites of food items, satisfying widely divergent tastes, may furnish the same number of calories, proteins, etc., which the physiologists might recommend as minima or as optima. Similarly there can be many varieties of housing arrangements and clothing wardrobes, any one of which might meet the few requirements upon which a substantial degree of scientific agreement exists.

Another way of meeting this problem is that of educating the consumer to a better understanding of consumption values. With regard to food, there is abundant evidence in many countries that education, properly applied, can serve to reshape popular dietary habits along the lines of more rational nutrition. The widespread tendency in recent years towards increased consumption of milk, fresh fruit, fresh vegetables and other protective foods is a case in point. The same is true, though in less degree, with regard to housing and clothing.

As is well known, Governments have assumed more and more this function of consumer education, and much has been made of the dangers inherent in such State action. However, in democratic communities the State is only one of the several agencies engaged

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1 See Chapter I, p. 13.
2 International Labour Office: Workers' Nutrition and Social Policy, pp. 119-120.
in such work; aside from extensive private advertising, there are many voluntary non-profit organisations, scientific bodies, co-operative societies, etc., which try to reach the mind and pocket of the consumer. If the State merely tries to eliminate fraudulent advertising and does not prevent freedom of discussion, its educational efforts in this field can be highly beneficial, as shown by the experience of a number of countries.

Another point calls for emphasis here. It may be granted that much of the worker’s consumption to-day is determined by considerations extraneous to needs and health. But of greater importance is the fact that the worker’s “freedom of choice” is very much limited by income and by economic and social conditions and that, as all studies of family budgets show, there is a strong tendency to change habits of consumption, in accord with norms, as income increases and as education spreads. This means that “freedom of choice” need not be infringed if by educational and social policies tastes and habits are changed so that choice is not only free but also rational. The task of improving living standards involves not merely supplying existing wants in a more satisfactory way but also in stimulating and developing more and better wants.

Still, it is possible in setting up norms or standard budgets to disregard the short-run view in favour of long-range purposes. This has been illustrated, for instance, by housing policies in some countries where workers’ families were given better housing facilities but at such costs as to reduce seriously their consumption of protective foods. It is also important to keep in mind that education may be a slow process and that attempts to force rapid changes in budgetary expenditures in disregard of tastes and habits may defeat the very purposes of social policy.

To meet this situation, social policy could further be guided by studies showing the effect of increased income on the demand for commodities and services. It is known that increased income will usually not be spread evenly over all the commodities and services purchased with the former income, and that increased prices of

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1 See International Labour Office: Workers' Nutrition and Social Policy.
2 "The chief thing which the common-sense individual actually wants is not satisfaction for the wants that he has, but more and better wants. The things which he strives to get in the most immediate sense are far more what he thinks he ought to want than what his untutored preferences prompt. ... However, it is of the greatest importance to realise that for the vast majority of individuals happiness depends on the possession of certain simple things which all men desire". F. H. Knight: The Ethics of Competition, p. 22.
different commodities do not lead to a correspondingly decreased consumption. Among the very poorest classes any increase of income is almost certain to be spent on greater consumption of the necessaries of life, but as income increases there is a tendency to redistribute the family resources in favour of the less necessary articles, the better qualities of food and clothing, and the various miscellaneous items which do not fall within the group of "necessaries". Theoretical and a few practical studies have been made of these questions by examining what is termed the elasticity of demand, i.e. the responses which consumers make to changes in relative prices and in incomes. By studying how and in what proportion expenditure on different items increases or decreases as the prices of various articles go up or down, or as the income of the family increases or decreases, it is possible to obtain measurements of the relative importance attached to these articles ¹.

Conclusion

The questions discussed above have an important practical bearing on the further study of workers' standards of living and on problems of policy. They cannot, however, be further considered in this preliminary Report. But in order to give concrete meaning to the various questions raised in this chapter and to illustrate the methods described, it has been thought desirable in this preliminary Report to present in Chapter III a summary description of workers' living standards in a few countries.

¹ See Preliminary Investigation into Measures of a National or International Character for raising the Standard of Living, Economic Committee, League of Nations, Geneva, 1938.
CHAPTER III

SOME ASPECTS OF WORKERS' STANDARDS OF LIVING
IN CERTAIN COUNTRIES

To give an approximate picture of actual living conditions in various parts of the world and to illustrate the use in specific instances of the types of material outlined in Chapter II, the present chapter presents data regarding income and levels of living in four countries. These countries are the United States of America, a large and highly developed country; Poland, a country in Eastern Europe, predominantly agricultural; India, a large area of 360 million inhabitants where special problems and conditions arise; and Japan, a modern industrial country of the Far East.

It should be emphasized that it is not the purpose here to present a comprehensive analysis of the conditions of living of the workers in each country—a task which would be quite impossible in the space available, even if the data were in all respects adequate—but to show by illustrative data the methods and possibilities of using the available materials (and revealing also the gaps in these materials) in a survey of living standards. Where the data permit, actual consumption is compared with norms of adequacy for food and housing. Information respecting health and literacy has been presented because of their basic relation to other determinants of the worker's standard of living.

The norms of adequacy used for the analysis here are necessarily provisional. In view of the factors discussed in Chapter II making for variations in food and housing requirements, no attempt has been made to apply the same norms to each of the four countries. On the contrary, the conclusions of experts within the several countries, taking into consideration the peculiar characteristics of each country, have been taken as the basis for the norms or points of reference. The food norms in general take the London standards as a point of departure, but make allowance for climate, average body size, activity and, to some extent, customs prevailing in the country.
In the case of housing, where the necessity for variation with climate, type of society, and custom is apparent, no internationally accepted criteria are available as a basis for norms; as a result, the tentative norms, where any have been used, are those put forward within the several countries by public or semi-public bodies, or, in default of these, are such as by other tests may be fairly regarded as meeting the community standards of adequacy in housing.

The discussion begins with the United States of America and takes up in succession Poland, India, and Japan.

I. _The United States of America_

In describing or appraising living standards in a country of about 130,000,000 inhabitants, comprising native whites, foreign born, and Negroes, with widely varying climates and with contrasting industrial and agricultural conditions, the question must be faced whether to give averages and give tables showing distributions, or to give materials for particular selected areas. The national averages tend to obscure the wide diversities which give the real clues to deficiencies in actual consumption; distributions for the entire country, while more satisfactory from the point of view of the size and proportion of divergent groups, cover up the varying regional differences; while the analysis of selected communities suffers from the difficulty that they may not be representative of the whole.

As the available data do not give national averages or even distributions on many points, the procedure adopted here has been to study the data for selected communities. The communities selected are:

- New York City, the largest city in the country, with a heterogeneous population of over 7,000,000 engaged in a wide variety of commercial and industrial pursuits;
- Portland, Oregon, a city of approximately 300,000 on the Pacific Coast, predominantly native white, a shipping, trading, and manufacturing centre for a relatively sparsely populated hinterland of timber, wheat, and fruit lands;
- Atlanta, Georgia, a city in the south-east with a large Negro population, a commercial and industrial centre for extensive cotton, tobacco, timber, and fruit-growing areas.

In addition, data are presented for “share croppers” in the south-east, who till land not their own on a crop-sharing basis.

A. _Family Income per Unit_

An estimate for the United States as a whole of the distribution of family incomes is being prepared by the National Resources Committee on the basis of the extensive sample studies covering large, medium-sized and small cities, villages, and farm areas in six general regions, made for the *Study of Consumer Purchases* in the United States during 1936-1937. This estimate is not yet available at the time of writing. But the basic materials for a few cities and regions have been made

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1 The only other comprehensive estimates covering family incomes are those contained in the study of *America's Capacity to Consume*, by Leven, M., Moulton, H. G. and Warburton, C., published by the Brookings Institution.
available and are utilised here as illustrative data in the discussion of income and expenditure which follows.

**TABLE I. CUMULATIVE PERCENTAGES OF NON-RELIEF WHITE AND NEGRO FAMILIES ACCORDING TO ANNUAL INCOME PER CONSUMPTION UNIT IN SELECTED AREAS, UNITED STATES, 1936**

<table>
<thead>
<tr>
<th>Annual income per consumption unit (dollars)</th>
<th>White population</th>
<th>Negroses</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City</td>
<td>Portland</td>
<td>Atlanta</td>
</tr>
<tr>
<td>Less than 50 . .</td>
<td>0.5</td>
<td>0.0</td>
</tr>
<tr>
<td>&quot; 100 . .</td>
<td>1.4</td>
<td>2.2</td>
</tr>
<tr>
<td>&quot; 150 . .</td>
<td>3.0</td>
<td>5.9</td>
</tr>
<tr>
<td>&quot; 200 . .</td>
<td>6.6</td>
<td>11.4</td>
</tr>
<tr>
<td>&quot; 300 . .</td>
<td>13.6</td>
<td>22.2</td>
</tr>
<tr>
<td>&quot; 400 . .</td>
<td>24.5</td>
<td>38.8</td>
</tr>
<tr>
<td>&quot; 500 . .</td>
<td>36.5</td>
<td>49.9</td>
</tr>
<tr>
<td>&quot; 600 . .</td>
<td>45.6</td>
<td>60.8</td>
</tr>
<tr>
<td>&quot; 700 . .</td>
<td>54.2</td>
<td>67.1</td>
</tr>
<tr>
<td>&quot; 800 . .</td>
<td>63.2</td>
<td>75.7</td>
</tr>
<tr>
<td>&quot; 900 . .</td>
<td>71.7</td>
<td>83.3</td>
</tr>
<tr>
<td>&quot; 1,000 . .</td>
<td>81.9</td>
<td>90.7</td>
</tr>
<tr>
<td>&quot; 1,200 . .</td>
<td>87.9</td>
<td>94.2</td>
</tr>
<tr>
<td>Total . .</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1 In calculating this table, the annual income per consumption unit for each family was calculated as follows: the annual income corresponding to the mid-point of the income group in which the family was classified (for the lowest income class ($6-250) the average was estimated at $200) was divided by the number of consumption units in the family as estimated from the family type in accordance with the following schedule (each adult 16 years of age and over counted as one " unit " and each child under 16 as half a " unit "):

<table>
<thead>
<tr>
<th>Family type</th>
<th>Number of persons</th>
<th>Number of consumption units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Husband and wife</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>2. Husband, wife, and one child</td>
<td>3.0</td>
<td>2.5</td>
</tr>
<tr>
<td>3. Husband, wife, and two children</td>
<td>4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>4. Husband, wife, one person 16 or over, and one or no other person of any age</td>
<td>3.5</td>
<td>3.25</td>
</tr>
<tr>
<td>5. Husband, wife, one person 16 or over, one child, and one or two more persons of any age</td>
<td>5.5</td>
<td>4.25</td>
</tr>
<tr>
<td>6. Husband, wife, three or four children</td>
<td>5.5</td>
<td>3.75</td>
</tr>
<tr>
<td>7. Husband, wife, one child, and four or five other persons of any age</td>
<td>7.5</td>
<td>5.875</td>
</tr>
<tr>
<td>Others. All other family types</td>
<td>7.0</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Washington, 1934. However, for present purposes of showing the distribution of families according to available income per unit, these data fail to meet the requirements, since no analysis is made according to the size of families receiving each income, except for a distinction between persons living alone and other families. Furthermore, the data are for 1929, a year when national income reached its highest point, and are therefore not applicable to the years of more modest national income which followed; and finally the picture does not separate the wage-earning group from those in other occupational classes. Though the study utilised all the materials available at the time for its estimates, the data on certain points were extremely meagre as compared with the more abundant material available in the Study of Consumer Purchases.

1 The U.S. Bureau of Labor Statistics furnished data on incomes, family composition and expenditures for New York City, Portland, and Atlanta; S. L.
Table I presents a distribution of family incomes per unit for selected samples of the population (exclusive of relief groups) in New York City, Portland (Oregon), Atlanta (Georgia), and the share croppers of the south-eastern region.

It appears that in the sample the median family income per unit per year for native whites in New York City fell between $700 and $800, in Portland (Oregon), and in Atlanta it was slightly above $600, while in the south-eastern region it fell between $150 and $200 a year. For the Negroes in New York it was just over $500, while it fell below $300 in Atlanta and below $150 in the south-east region.

B. Food Consumption and Nutrition

What do these incomes per unit mean in terms of food consumption and adequacy of nutrition? For this purpose data are available for the white families (non-relief) in the same cities; and for the white farmers (also non-relief) in the south-east, showing the analysis and appraisal of a sample of actual families in relation to expenditure on food. This material shows the percentage of families which at each level of food expenditure per unit had diets which the Bureau of Home Economics characterised as “good” or “very good” (corresponding approximately to the London standards).

On the basis of the data for families in New York City, the following table has been set up:

<table>
<thead>
<tr>
<th>Food expenditure per unit per year</th>
<th>Percentage of families with good or very good diets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to $75</td>
<td>0</td>
</tr>
<tr>
<td>106</td>
<td>10</td>
</tr>
<tr>
<td>155</td>
<td>25</td>
</tr>
<tr>
<td>195</td>
<td>50</td>
</tr>
<tr>
<td>270 and over</td>
<td>100</td>
</tr>
</tbody>
</table>

This table indicates therefore that in the sample of families whose diets were studied, about half of those spending at the rate of $195 per unit per year were able to achieve a good or very good diet — in other

the U.S. Bureau of Home Economics furnished comparable data for farm share croppers in the south-east. Analyses of nutritive adequacy of diets were made by the Bureau of Home Economics on the basis of records of actual weekly food consumption obtained partly by the Bureau of Labor Statistics and partly by the Bureau of Home Economics.

These conclusions of course are advanced subject to reservations, the chief of which perhaps is the condition derived from the fact that the figures are based upon a sample of the population, and, though made with due care and precaution, the values of a sample are always subject to fluctuations due to possible bias in method of selection or to chance. In regard to these questions reference must be made to the sources in which the figures will be published.

For Portland, data for several Pacific Coast cities were used; for Atlanta, data for several south-east cities combined were used.
words adequate nutrition. While the families in the sample which were willing to supply food records may have had superior managing ability, it seems a reasonable assumption for present purposes that on the average all families with an equal amount to spend on food might be able to obtain equally good results, at least with proper educational measures covering the purchase and utilisation of foods.

This material, in conjunction with the data of table I suggests the possibility of an interesting generalisation. If food expenditure can be inferred from the average income per unit, then the proportion of all families having incomes per unit sufficient to purchase adequate diets can be estimated, or the proportion of families with adequate or inadequate diets can be estimated for each income-per-unit group. The correlation between these two, food per unit and income per unit, is also available from this basic material.

Without detailing all the steps in the procedure the general results for New York City are presented in table III in the form of estimated percentages of families (and of persons and of children) in each of the five food adequacy groups. These groups are defined in terms of the

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1 In the analysis of diets the number of units in particular families was calculated according to the food expenditure scale of the Bureau of Home Economics, but in table I above, an approximate consumption unit has been used; and the assumption is made throughout the present analysis that this approximate unit gives substantially the same results as the more refined unit.

2 For the families studied in each area, as described above under B (p. 66), the percentage of families having good and very good diets was determined for each level of food expenditure per “food-expenditure-unit”. These results were plotted and a free-hand smooth curve drawn through the points to show the relation between food expenditure per “food-expenditure-unit” and percentage of families with good or very good diets.

From this smooth curve points of food expenditure per “food-expenditure-unit” were ascertained at which zero, 25, 50 and 100 per cent. of the families had good or very good diets. These points were taken as boundaries of the five classes described in table III, the lowest of which had no families with good or very good diets, the highest had 100 per cent., and the intermediate classes different proportions of good and very good diets. (Table II shows the results for New York City.)

The other steps in the procedure were: for a sub-sample of the whole sample on which table I is based the annual food expenditures per consumption unit were determined for each income per consumption unit class; in calculating the amounts per consumption unit the same assumptions were made as in making the distributions according to income per consumption unit (see footnote to table I). The analysis actually was made for each family type. It was found that within each population group the same amounts were spent per consumption unit on food at any given income per consumption unit class, independent of family type. Very appreciable differences, however, were found between different population groups as regards the amount spent per consumption unit on food at any given income per consumption unit. Thus, at the income level of $300 per consumption unit per annum, white families spent on food about $170 in New York City, $130 in Portland (Oregon), and $120 in Atlanta (Georgia). Negro families at the same income per consumption unit of $300 had food expenditures per consumption unit of about $115 in New York City, and $90 in Atlanta; while both white and Negro share croppers spent about $140 (including the local retail value of home-produced foods).

The results were plotted in graph form and a free-hand smooth curve drawn through the computed points to show the relation between food expenditure per consumption unit and income per consumption unit.

To permit of applying the boundary points or class limits of the five classes, which were in terms of food expenditures per consumption-units, to the
estimated proportions of families within each group, with good or very good diets, namely: I, None; II, 1 per cent. to 25 per cent.; III, 25 per cent. to 50 per cent.; IV, 50 per cent. to 99 per cent.; V, 100 per cent. A rough estimate on the basis of these probabilities, of the proportion of the total of each population group which presumably had good or very good diets is shown in the last column of the table.

The figures indicate that in New York City over half of the native white families, 46 per cent. of the persons and two-fifths of the children fell in group V (were certainly well nourished), while 19 per cent. of families and 29 per cent. of the children fell in one of the three lowest groups, namely those in which the chances of achieving an adequate diet were less than one-half. On the basis of the chances for an adequate diet at each level, it has been roughly estimated, as shown in the last column of table III, that 79 per cent. of the families, 76 per cent. of the persons and 73 per cent. of the children in the total native material available in table I, which shows a distribution of families by income per consumption unit, two further steps were necessary. First, the assumption was made that the class limits for the five groups in terms of food expenditures per food-expenditure-units yield for present purposes approximately the same results as would class limits in terms of food expenditures per consumption units (calculated as described in the footnote to table I). Secondly, an estimate of the class limits in terms of income per consumption unit was made on the basis of the relationship, shown in the smooth curve described above, between income per consumption unit and food expenditure per consumption unit. The assumption was made that these class limits in terms of income per consumption unit, though developed from part of the sample only, can be applied to the whole of the sample used as the basis for table I.

The results are put in the form of incomes per consumption unit corresponding to points at the boundaries of the five classes noted above.

(In applying the points of food expenditure per consumption unit obtained as above (third paragraph) to the population groups, an adjustment had to be made for Portland (Oregon) and Atlanta to take account of the fact that the food study was for the Pacific coast and the south-east region respectively. The adjustment was made by means of price differences ascertained in a W.P.A. study of inter-city differences in costs of living. In the three cities a slight adjustment was made to take account of price changes between the time of the food study and that of the budget study.)

Finally, the relative numbers of families, persons, and children at each food adequacy level was determined by placing the distributions shown in table I in relation to these income per consumption unit boundaries of the five classes.

A final estimate of the proportion of good and very good diets in each population group was obtained by summing the estimated proportions of good and very good diets in each of the five classes.

For the Negro population groups no estimates of diets are shown in the table. Substantial differences are found in the white and Negro families in food purchases—Negro families spend a much smaller proportion of their budgets on food than do white families at the same income level. Since special data on the adequacy of the diets resulting from a given food expenditure by Negro families were not yet available at the time of the study, the proportions of good and very good diets could be calculated only on the assumption that the same proportions found for white could be applied to the Negro families, i.e. that a given food expenditure by Negro families would give the same proportion of adequate diets as in white families. On this assumption very much smaller proportions of adequate diets were found for the Negro than for the white families.

1 If an income equivalent to that at which half the families did achieve good or very good diets may be regarded as an income sufficient to buy an adequate diet, this means that the three lowest groups had inadequate incomes from this standpoint.
white population sampled in New York City were well nourished. The relatively greater predominance of persons and especially of children in the lower food adequacy groups is explained by the greater proportion of large families at the low income per unit levels and is particularly significant for the future health of the population. The same situation was found to prevail also in all the other regions studied.

When, however, separate figures were computed for families of white wage earners (i.e. skilled, semi-skilled and unskilled manual workers), the proportions with adequate diets were lower in all categories. Thus only 35.9 per cent. of wage earners' families, as contrasted with 52.2 per cent. for all occupations, were estimated to fall in group V, and the proportion of children of wage-earning families in group V was only 24.4 per cent. as compared with 39.5 per cent. for all occupations.

**TABLE III. — LEVELS OF FOOD ADEQUACY, WHITE FAMILIES, NEW YORK CITY, 1936-1937**

<table>
<thead>
<tr>
<th>Item and population group</th>
<th>Level of food adequacy</th>
<th>Percentage falling in each food adequacy group¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I.</td>
<td>II.</td>
</tr>
<tr>
<td></td>
<td>Certainly ill nourished</td>
<td>Probably ill nourished</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Between none and ¼</td>
</tr>
<tr>
<td>Chances of being well nourished</td>
<td>None</td>
<td>Up to $75</td>
</tr>
<tr>
<td>Approximate amounts of annual food expenditure per unit at which chances were as indicated above among the White population</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage falling in each food adequacy group¹</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All occupations:</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>Families</td>
<td>100.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Persons</td>
<td>100.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Children</td>
<td>100.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Wage earners only:</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>Families</td>
<td>100.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Persons</td>
<td>100.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Children</td>
<td>100.0</td>
<td>0.3</td>
</tr>
</tbody>
</table>

¹ i.e. having total incomes per unit corresponding to the indicated range of food expenditure per unit.

Following for other areas methods similar to those used in New York, striking regional differences are found. The summary figures for.
Portland (Oregon), Atlanta (Georgia) and south-eastern share croppers are presented in table IV. It will be seen even from these limited and approximate figures that the proportions of the populations in the lower adequacy groups were much higher in the other regions, with the result that the proportions of all families estimated to be well nourished dropped to 54.6 in Portland and to 27.0 for share croppers in the south-east. Percentages for persons and children were still less. Among the share croppers, no families at all fell in group V. If the point at which 50 per cent. of families achieved adequate diets be taken as the income sufficient to buy such diets, it is seen from the lower part of table IV that especially large proportions of share croppers fell into this category.

TABLE IV. — LEVELS OF FOOD ADEQUACY, WHITE FAMILIES, PORTLAND, ATLANTA, AND SOUTH-EASTERN FARMS, 1936-1937

<table>
<thead>
<tr>
<th>Item and population group</th>
<th>All occupation groups</th>
<th>Share croppers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Portland</td>
<td>Atlanta</td>
</tr>
<tr>
<td>Percentage of total population estimated to be well nourished</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>54.6</td>
<td>81.0</td>
</tr>
<tr>
<td>Persons</td>
<td>52.0</td>
<td>76.9</td>
</tr>
<tr>
<td>Children</td>
<td>48.5</td>
<td>42.1</td>
</tr>
<tr>
<td>Percentage of total population falling in adequacy groups I, II and III combined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>50.0</td>
<td>16.9</td>
</tr>
<tr>
<td>Persons</td>
<td>54.9</td>
<td>21.6</td>
</tr>
<tr>
<td>Children</td>
<td>61.2</td>
<td>27.3</td>
</tr>
</tbody>
</table>

1 Figures corresponding to the last column in table III.
2 i.e. having total incomes per unit corresponding to ranges of food expenditure per unit indicated above and with chances of being well nourished of less than \( \frac{1}{2} \).

It must be borne in mind that the figures shown in tables III and IV are all rough approximations and are subject to a number of important reservations. Chief of these is the fact that the food adequacy groups do not show positively the proportion of good and very good diets. They are based rather upon the probabilities for families in each group of having adequate diets as explained above. Nevertheless, a rough estimate may be made, on the basis of these probabilities, of the proportions which in each group presumably had good or very good diets. These estimates are shown in table III in the last column and in table IV as the first item. The other reservations which should be mentioned include:

1. Except in the case of New York, the figures relate to the native white population as a whole, without distinguishing wage earners.
2. In establishing the percentages of families which actually achieved adequate diets, no distinction was made between manual workers and clerical workers.
The analysis of the diets follows a classification according to food expenditures, whereas the analysis of families is made according to income available rather than expenditures made.

The analysis covers only non-relief families; in other words in this respect it tends to be too favourable.

In interpreting the results of table III the implications of the method of classification must be borne in mind. The lowest level was defined in terms of the absence of any families with good or very good diets; on that level inadequate nutrition may be said to be exclusively a problem of income.

The importance of income as a cause of malnutrition diminishes as the higher adequacy levels are successively considered, until, at the highest, it entirely disappears. On the intermediate levels other factors, such as lack of skill in management, etc., play an important part. On the IVth level, for instance, where more than half of the families had adequate diets, failure to obtain an adequate diet may have been due in part to other causes than insufficient income. Evidently, therefore, there is much room at this level for improvement by means of appropriate advice and educational measures.

Apart from the general data already presented on the proportion and amount of income spent for food and inferences on the adequacy of diets in each income class, limitations of space do not permit any analysis of the actual foods consumed by workers in the United States, or details of food consumption on different economic levels. Some details on this point are given in Chapter III of Workers' Nutrition and Social Policy.

Space is not available for any general discussion of malnutrition. But a brief reference may be made to the statistics of deaths from pellagra. In 1935 in the United States there were 3,543 deaths from this "deficiency disease". Pellagra is largely confined to ten States of the eastern and central South, where the death rate from this disease averaged 10.4 per 100,000 of estimated population.

C. Housing

An appraisal of housing in the United States on the basis of four tests gives the following results: six million non-farm homes and five million farm homes in the United States, or over a third of all the homes of the nation are estimated to be definitely sub-standard. Houses reported

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1 Additional data permitting considerably more elaborate analyses will shortly be published in the United States by the Bureau of Labor Statistics and the Bureau of Home Economics. The data were obtained in connection with the Study of Money Disbursements of Families of Wage Earners and Clerical Workers conducted by the Bureau of Labor Statistics in 1934-1936 in representative large cities and also from the Study of Consumer Purchases conducted co-operatively by both Bureaux in 1936-1937 in representative urban and rural areas in six regions of the country.


3 Housing is considered sub-standard "if each family is not furnished with an ample and pure supply of running water, with an indoor flush toilet for its exclusive use, with a bathtub or shower, and if, in a built-up community, it
as needing structural repairs to foundations, roofs, walls, etc., or as wholly unfit for human habitation constituted 18 per cent. of all the houses surveyed in 64 cities in 1934. The proportion ranged from 39.5 per cent, in Paducah (Kentucky), to 8.3 in Syracuse (N.Y.) 1.

The following table indicates the situation with respect to crowding and absence of certain facilities for 64 cities covered in the Real Property Inventory.

### TABLE V. — CROWDING AND HOUSING FACILITIES 1
(64 representative cities in the United States, 1934)

<table>
<thead>
<tr>
<th>Measure of crowding or type of facility</th>
<th>Percentage of dwelling units in 64 cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwelling units with:</td>
<td></td>
</tr>
<tr>
<td>3 rooms or less</td>
<td>20.7</td>
</tr>
<tr>
<td>More than one person per room 2</td>
<td>16.8</td>
</tr>
<tr>
<td>No running water</td>
<td>5.0</td>
</tr>
<tr>
<td>Neither gas nor electric light</td>
<td>8.1</td>
</tr>
<tr>
<td>No private indoor water closet</td>
<td>13.5</td>
</tr>
<tr>
<td>Neither bath tub nor shower</td>
<td>20.2</td>
</tr>
</tbody>
</table>

1 SOURCE: Ibid., p. 82.
2 Including occupied dwellings only.

The conditions summarised in the foregoing table varied considerably from city to city. Certain cities showed high percentages of dwelling units lacking the various facilities. Furthermore, the preponderance of overcrowding and of absence of various facilities in the given cities coincide with the lower categories of monthly rental.

### TABLE VI. — OVERCROWDING AND HOUSING FACILITIES, SELECTED CITIES, 1934 1

<table>
<thead>
<tr>
<th>Item</th>
<th>Providence, R.I.</th>
<th>Portland, Oregon</th>
<th>Charleston, S.C.</th>
<th>Atlanta, Ga.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of dwellings</td>
<td>66,734</td>
<td>96,225</td>
<td>17,911</td>
<td>72,266</td>
</tr>
<tr>
<td>Per cent. of dwellings with:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 1 person per room 2</td>
<td>18.8</td>
<td>7.3</td>
<td>40.4</td>
<td>30.3</td>
</tr>
<tr>
<td>No private indoor toilet</td>
<td>3.1</td>
<td>6.4</td>
<td>48.7</td>
<td>20.6</td>
</tr>
<tr>
<td>No bath tub or shower</td>
<td>20.4</td>
<td>8.4</td>
<td>56.2</td>
<td>31.9</td>
</tr>
<tr>
<td>No gas or electric light</td>
<td>2.3</td>
<td>1.3</td>
<td>50.0</td>
<td>29.4</td>
</tr>
<tr>
<td>No running water</td>
<td>0.1</td>
<td>1.1</td>
<td>21.7</td>
<td>8.1</td>
</tr>
</tbody>
</table>

1 SOURCE: Real Property Inventory, U.S. Bureau of Foreign and Domestic Commerce.
2 Including occupied dwellings only.

is not connected with the sewer system ". The estimate was prepared by counting houses for which the rental value shown in the 1930 Census would not obtain adequate housing under average conditions of building costs, etc. Wood, Edith E.: Slums and Blighted Areas in the United States. Federal Emergency Administration of Public Works, Housing Division Bulletin No. 1. Washington, 1935, pp. 4-6.

1 Ibid. Data from the Real Property Inventory, a housing census taken in 64 representative cities, conducted by the U.S. Bureau of Foreign and Domestic Commerce.
The situation is worse with respect to farm homes, where distances between dwellings make it more costly to provide sewer, electrical and similar connections. Over half the sample of the farm homes in 36 out of 46 States studied in the Farm Housing Survey were without piped water. In certain remote mountainous regions in the United States, for example the southern Appalachians, the conditions of living are much worse. In a study of family living in Knott County, Kentucky, in 1930, over 40 per cent. of the 228 farm homes visited were composed of 3 rooms or less, and in 70 per cent. of those studied there was more than one person per room. Only 4 of the families had running water or a pump in the house; all the others carried water into the house from wells or springs. 51 per cent. of the families studied had no toilet facilities of any kind, not even an outdoor privy, and only one family had an inside flush toilet with a tile drain to a stream. The water supply was frequently situated too close to the privy. In 84 cases families reported drainage from the privy to the water supply and in 42 drainage from the manure pile to the water supply.

Conditions of living among Negro families in the south-east are distinctly worse than among the white families, their incomes being lower.

D. Health

The extent of illness is indicated by the estimate for the population as a whole, that on an average four million persons (out of a total of about 130 million) are disabled by illness.

Data for the country as a whole and from certain special studies serve to suggest the close relationship between income and health. The National Health Survey showed that among the urban population illnesses disabling for one week or longer in a twelve-month period occurred among families on relief at a higher rate than among families with a higher economic status.

The rate of infant mortality has also been found to be higher at the lowest income levels. A study in seven cities (data for 1913-1915) showed mortality rates of infants classified according to per capita income from their fathers' earnings to rise from 60.5 for those in the " $400 and over "

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1 The survey in 1934 by the U.S. Bureau of Home Economics covered farm homes in 352 counties of 46 States.
group to 215.9 in the "less than $50" group. In a Cleveland study in 1928 the rate was 86.6 deaths per thousand live births in the lowest economic group as contrasted with 35.7 in the highest.

With regard to relative incidence of illness among Negroes and whites, a study in New York City of Harlem Negroes and Lower East Side whites, of roughly similar occupational status, employment and incomes, showed an excess of disability illness rates (excluding epidemic diseases) for adult Negroes classed as of "poor" and "moderate" economic status. In the group as a whole the sickness rate for Negro females 15 years of age and over was 36 per cent. higher than that observed among white women of comparable ages in the Lower East Side. Data from the National Health Survey, however, classifying Negro and white families according to whether or not they were on relief, show a slightly lower disabling illness rate for Negroes on relief than for whites. The report of the study concludes: "Low economic status, rather than inherent racial characteristics in the reaction to disease, thus appears to account in large measure for the higher disability rate observed among Negroes" (relief and non-relief together).

E. Literacy

The simplest measure of educational achievement, literacy statistics, shows the United States to have improved in the period between the last two Censuses. In 1930, 4.3 per cent. of the population ten years of age and over were unable to write in any language, as contrasted with 6.0 per cent. in 1920. Of the native white population of native parentage aged from 10 to 20 years, 99.2 per cent. were literate in 1930; the percentage reached 99.8 per cent. in the Pacific and East North Central regions.

The problem of illiteracy is more serious for rural than for urban areas (6.0 per cent. as compared with 3.2 per cent.), since the provision of school facilities in the former is more difficult, more costly per capita, and the school attendance laws more difficult to enforce. In particular, in certain rural mountain regions of the South-eastern States a considerable proportion of illiterates is found even among the native Whites. Special problems are found also for the Negroes and for Indians and Mexicans. In the Southern States, separate schools must be provided for Negroes and whites: the money available for education has to be divided, and the result has been that the school facilities, especially those for Negroes, have suffered. This is reflected in the relatively high proportion of illiterates among Negroes of 16.3 per cent. for the country as a whole, and similarly high rates for a number of States.

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2 Sydenstricker, *op. cit.*, p. 100.
of the South where large proportions of the Negroes are found. For Indians and for Mexicans, the illiteracy rates are also high.

II. — Poland

Standards of living in Poland must be considered with reference to the background of economic and population structure, as well as of its history and customs. With the territory reunited to form the Polish Republic following the war, Poland is the largest country in Eastern Europe except the U.S.S.R. Rapid population growth is indicated by an 18 per cent. increase during the decade 1921 to 1931, with the total population reaching 32 millions in the latter year.

Despite a slight increase in the percentage of urban dwellers between the two censuses Poland remained in 1931 essentially an agricultural country with 73 per cent. of the population dwelling in rural areas. The urban population was found principally in the western part of the country in the important mining and industrial regions of Silesia, Krakow and the Dombrowa Basin, and in Warsaw, Lodz and Poznan. The southern and eastern parts of the country were essentially agricultural.

A. Income

The family budget surveys ¹ of 1927, 1928 and 1929, though based on small samples, give some notion of the income levels among families of employed workers in the principal industrial cities prior to the Great Depression. In all three years the group spending 600 to 899 zlotys ² per year per consumption unit contained the largest number of families, while approximately 15 per cent. of the families spent less than 600 zlotys and around 13 per cent. spent 1,200 zlotys and over per consumption unit. The families of industrial workers willing to keep household accounts for a year and included in the surveys were, however, somewhat above the average in income ³.


² The Polish monetary unit, the zloty, is valued in 1938 at a little more than four-fifths of the Swiss franc. The exchange rate on the Warsaw bourse from 1928 to 1935 was approximately 172 zlotys per 100 Swiss francs, or 0.58 franc per zloty.

³ This conclusion is confirmed by a study of wages made by Dr. Ludwik Landau: The Evolution of Wages in Connection with the General Economic Conditions in Poland. Institute for Social Problems, Labour Market and Unemployment Series, No. 4, Warsaw, 1933. According to this study, the industrial worker's average monthly earnings were estimated at 172 zlotys per month. The earnings of over 25 per cent. of all industrial workers were below 100 zlotys per month. On the other hand, 25 per cent. were estimated to earn over 230 zlotys per month and 12 per cent. over 300 zlotys, these latter figures approaching the earnings of office workers. It may be concluded on the basis of very rough calculations that the annual family income per unit of 25 per cent. of all industrial workers in Poland in 1929 was 600 zlotys or less. This estimate has been made on the following assumptions, whose approximate and tentative character must be stressed:
For the city of Warsaw more precise data on income distribution are available in the form of a sample survey in 1935 of 300 representative families in working-class districts of Warsaw. The data regarding incomes of these families are presented in Table VII as an illustration of the distribution of families and of consumption units according to income per unit. The median family income was 8.6 zlotys per unit per week or approximately 400 per year. More than two-thirds of the families had less than 12.50 zlotys per week or 650 per year. It will, of course, be observed that the year 1935 was one of marked depression as compared with 1929. The index of production for Poland, which stood at 100 in 1929, had fallen to 66 in 1935. Some or all of the members of approximately one-third of the families studied were unemployed at the time of the investigation.

### Table VII. — Cumulative Percentages of Families and Units According to Income Per Consumption Unit

<table>
<thead>
<tr>
<th>Total family income in zlotys per week per consumption unit</th>
<th>Cumulative per cent. of families</th>
<th>Cumulative per cent. of units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 2.50</td>
<td>4.0</td>
<td>5.3</td>
</tr>
<tr>
<td>, 3.75</td>
<td>15.7</td>
<td>21.0</td>
</tr>
<tr>
<td>, 5.00</td>
<td>28.7</td>
<td>37.6</td>
</tr>
<tr>
<td>, 7.50</td>
<td>48.7</td>
<td>58.4</td>
</tr>
<tr>
<td>, 10.00</td>
<td>61.0</td>
<td>71.2</td>
</tr>
<tr>
<td>, 12.50</td>
<td>69.3</td>
<td>77.5</td>
</tr>
<tr>
<td>, 15.00</td>
<td>78.0</td>
<td>84.4</td>
</tr>
<tr>
<td>, 20.00</td>
<td>90.7</td>
<td>94.5</td>
</tr>
<tr>
<td>, 25.00</td>
<td>95.0</td>
<td>97.8</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1. If the income is expressed in zlotys per year per unit, with intervals comparable to those used in the family budget investigations of 1927-1929, the corresponding percentages are:

<table>
<thead>
<tr>
<th>Total family income in zlotys per year per unit</th>
<th>Cumulative per cent. of families</th>
<th>Cumulative per cent. of units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 600</td>
<td>66</td>
<td>75</td>
</tr>
<tr>
<td>, 900</td>
<td>85</td>
<td>89</td>
</tr>
<tr>
<td>, 1,200</td>
<td>94</td>
<td>96</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

2. Ibid. Table 17 (b).

A feature of the Warsaw income distribution which corresponds with that found also in the other countries is that the families with

(1) that sources of income other than earnings were negligible, an assumption borne out by the facts shown in the budget studies; (2) that annual earnings were twelve times monthly earnings; (3) that there was a rough average of 1.7 earners and 4.1 persons or approximately 3 consumption units per family.


2. The consumption unit scale used in the study was the same as
greater numbers of children are found consistently in the lower income per unit groups. The result as shown in column 3 of table VII is that there is even greater concentration of consumption units than of families at the lower income per unit level. In other words, the largest number of children are in the lower income-per-unit groups which are in general just those groups where food consumption and living conditions are most unsatisfactory.

Data with respect to the income of the rural population of Poland are even more fragmentary. Estimates of the size of rural holdings serve to give a general idea of the situation. It has been calculated that in 1938 in Poland there was a total of some 4,200,000 rural holdings; of these more than 60 per cent, consist of less than 5 hectares, which are "holdings too small, often unfit to supply a farming family with food and work in sufficient measure." Data concerning the income of the rural population may be found in publications of the Instytut Badania Konjunktur Gospodarczych i Cen: Badania nad dochodem społecznym w Polsce (Institute of Trade-cycle Research; Enquiries on National Income in Poland), Vols. 1 and 4 (by M. Kalecki and L. Landau), Warsaw, 1934 and 1935.

B. EXPENDITURE

An estimate of the meaning of the foregoing money incomes in terms of the goods and services bought by urban families is available for 1927, that used by the Chief Bureau of Statistics in the family budget studies, namely:

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Consumption unit scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
</tr>
<tr>
<td>Under 1</td>
<td>0.25</td>
</tr>
<tr>
<td>1</td>
<td>0.25</td>
</tr>
<tr>
<td>2-5</td>
<td>0.30</td>
</tr>
<tr>
<td>6-10</td>
<td>0.40</td>
</tr>
<tr>
<td>11-15</td>
<td>0.50</td>
</tr>
<tr>
<td>16-17</td>
<td>0.60</td>
</tr>
<tr>
<td>18 and over</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>0.85</td>
</tr>
</tbody>
</table>

1 Data concerning the income of the rural population may be found in publications of the Instytut Badania Konjunktur Gospodarczych i Cen: Badania nad dochodem społecznym w Polsce (Institute of Trade-cycle Research; Enquiries on National Income in Poland), Vols. 1 and 4 (by M. Kalecki and L. Landau), Warsaw, 1934 and 1935.

2 Calculations made by Czerniewski on the basis of sample studies conducted by the Institute of Social Economy at Warsaw (Instytut Gospodarstwa Społecznego w Warszawie) and cited in Unemployment and Under-nutrition of the Rural Population, a report presented to the Fourteenth General Assembly of the International Institute of Agriculture in the name of the Polish Government by Professor W. Staniewicz, May 1938, p. 4. As a result of the agrarian structure in Poland, there is said to be a real problem of rural over-population, especially in the southern region. Estimates recently made by M. Josef Poniatowski of Warsaw, quoted by Professor Staniewicz, indicate that approximately 4,000,000 of the 11,000,000 active farm workers could without prejudice to Polish agriculture be directed to other occupations or towards emigration.

1928, and 1929 in the budget studies previously referred to. For families in three important industrial centres in 1929 the average spending followed the trends shown in table VIII.

TABLE VIII. — DISBURSEMENTS OF POLISH WORKERS’ FAMILIES, WARSAW, LODZ, AND THE DOMBROWA BASIN, 1929

<table>
<thead>
<tr>
<th>Item</th>
<th>All families</th>
<th>Families spending per year per consumption unit in zlotys</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Up to 599</td>
</tr>
<tr>
<td>Average number of consumption units per family</td>
<td>3.87</td>
<td>4.62</td>
</tr>
<tr>
<td>Total net disbursements:</td>
<td></td>
<td>3,490</td>
</tr>
<tr>
<td>Zlotys per family</td>
<td>902</td>
<td>535</td>
</tr>
<tr>
<td>Zlotys per unit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per cent, for:</td>
<td></td>
<td>54.3</td>
</tr>
<tr>
<td>Food</td>
<td></td>
<td>4.0</td>
</tr>
<tr>
<td>Rent</td>
<td></td>
<td>4.7</td>
</tr>
<tr>
<td>Heat and light</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Other household operation</td>
<td></td>
<td>16.9</td>
</tr>
<tr>
<td>Clothing and shoes</td>
<td></td>
<td>16.6</td>
</tr>
<tr>
<td>Other disbursements ¹</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total disbursements</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹ Greater detail is available in the original report.


It will be seen from the foregoing table that there are important variations in spending habits at different economic levels. Thus, the percentage for food showed a sharp tendency to decline at higher levels, while that for rent, plus heat and light, declined only slightly. On the other hand, the percentages devoted to other household operations and to educational and cultural expenses increased markedly as incomes permitted. Though not shown in the table, there are important regional differences in spending habits among the three areas covered.

C. FOOD CONSUMPTION

Details regarding the average diets of urban Polish workers’ families (based on the family budget studies of 1927-1929) have been presented in Chapter III of Workers’ Nutrition and Social Policy. They show the predominant role of rye bread and potatoes—consumed by all the families, even those at the higher expenditure levels. They also show the strong tendency towards an increase in the consumption of fresh vegetables and fruits, meat, fish, and dairy products, as incomes increase. The data on the nutrition values of these average diets for three industrial
regions presented on page 68 of *Workers’ Nutrition and Social Policy* further suggest that particularly on the lower expenditure levels these diets do not meet the *optimum* food requirements of the London standards. The low quantities of dairy products, fruits, and vegetables (other than potatoes) consumed by the urban Polish families suggest the danger of insufficient protective foods.

From the data on income distribution for Warsaw, it is possible to make a somewhat more detailed estimate whether incomes are sufficient to buy adequate diets. In 1935 the cost of a worker’s diet tentatively considered as adequate \(^1\) in Warsaw was estimated at 0.928 zloty per day or 6.50 zlotys per consumption unit per week. If a very rough estimate be made that food expenditures would tend to constitute 50 per cent. of total expenditures, it will be seen from the income table on page 76 that about 71 per cent. of the families and 79 per cent. of the consumption units in families in representative working-class districts in Warsaw in 1935 had incomes insufficient to be associated with a food expenditure large enough to buy such a diet. If it be assumed that an adequate diet could, by careful planning and management, have been achieved in Warsaw in 1935 for almost half the figure previously used, or 0.50 zloty per unit per day (see footnote) or 3.50 per unit per week, and that food constituted 65 per cent. of total expenditure, it would still be found that approximately 29 per cent. of the consumption units in representative Warsaw working-class districts had incomes insufficient to purchase such diets \(^2\).

With respect to diet in rural Poland, there is, correspondingly, evidence of malnutrition, especially among large families living on small holdings of from 2 to 5.5 hectares. An enquiry regarding farm family food consumption in four important agricultural regions in densely populated areas was conducted for the period 1931-1933 by the Economic Section of the Pulawy Scientific Institute \(^3\). The findings

---

\(^1\) **Statistical Municipal Bureau of Warsaw**: *Kronika Warszawy*, No. 11, 1930. The nutritive value of this diet is as follows:

<table>
<thead>
<tr>
<th>Calories:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number</td>
<td>3,011</td>
</tr>
<tr>
<td>From food of animal origin</td>
<td>977</td>
</tr>
<tr>
<td>From plant</td>
<td>2,034</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proteins:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>From food of animal origin</td>
<td>78 grammes</td>
</tr>
<tr>
<td>From plant</td>
<td>36</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fats</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>From food of animal origin</td>
<td>81 grammes</td>
</tr>
<tr>
<td>From plant</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Carbohydrates</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>470 grammes</td>
<td></td>
</tr>
</tbody>
</table>

Attempts have been made by the Social Trade and Domestic School for Women in Lodz to work out menus adapted to the purchasing power of working-class families. Such menus, costing from 0.42 to 0.49 zloty per unit per day, have been worked out on the basis of about 2,000 calories, 70 grammes of protein, and 40 grammes of fats.

\(^2\) The rough character of the foregoing calculations must be stressed in view of the tentative nature of the assumptions enumerated above. For analysis of actual Polish food consumption see various publications of Dr. Emil Paluch; and A. Szczygiel i Z. Czerny, *W sprawie akcji dożywiania bezrobocnych*. Warsaw, 1937. (Food Consumption of the Unemployed.)

\(^3\) Z. Gronowska i W. Obrebski: *Spozycie rodziny w gospodarstwach karłowatych*. (Biblioteka Pulawska, Seria prac społeczno-gospodarczych, Nr. 82.) Warsaw, 1937. The findings of this study have been summarised
show failure to reach London standards for calorie requirements, though protein consumption was adequate. Considerable regional variations were found as well.

D. Housing

One method of estimating housing deficiencies is to ascertain the cost of housing which meets requirements set down by official or semi-public agencies on the basis of Polish living habits and reasonable relation to the workers’ ability to pay. The standards set down by the Workers' Housing Association (T.O.R.) present a basis of comparison for urban Poland. This Association, subsidised by the Government, has undertaken the construction of modest workers' dwellings, with the provision of the maximum facilities in the way of running water, central heating, etc., which can be brought within range of the workers' ability to pay. A typical dwelling constructed by this association is called a one and one-half room apartment, with central heating and sometimes with an elevator, consisting of a hall or antechamber, a principal room, a toilet and a kitchen with gas, electricity, and running water. Such a dwelling in the subsidised apartment houses in Warsaw in 1935 could be rented for approximately 25 zlotys per month. These model workmen's flats, which provide central gardens and play space for children, are, however, available only for a small portion of the working-class population. Two-room flats, without bath, and generally without toilets, in private buildings in 1935 could be rented for much less in old buildings than in new buildings constructed since the war and subject to no rent restriction. The rent in the old buildings of a two-room flat in Warsaw in 1935 was approximately 30 zlotys per month in certain districts and 20 to 25 zlotys in suburbs. If, then, for purposes of illustration, it is assumed that roughly 25 zlotys per month per family was necessary to rent an adequate dwelling in Warsaw in 1935 and that families spent as much as 10 per cent of their income for rent, it will be seen from the data on income distribution on page 76 that 91 per cent. of the representative families in Warsaw working-class districts had incomes insufficient to meet such expenditure. If it is assumed that rent constituted as much as 20 per cent. of total expenditure in 1935, then 61 per cent. of the families and 71 per cent. of the consumption units would fall into the group with incomes inadequate to meet this expense.

In English in a report on Unemployment and Under-nutrition of the Rural Population, presented in the name of the Polish Government by Professor W. Staniewicz to the International Institute of Agriculture, May 1938.


2 According to a communication from Dr. Ludwik Landau.

3 With the average of 2.89 consumption units per family found by Dr. Landau in the study quoted earlier, this would constitute a weekly rental of approximately 2.00 zlotys per consumption unit.

4 In the budget study of 1929 the average expenditure for rent in Warsaw was only 6 per cent.; since incomes have decreased from 1929 to 1935, probably more proportionately than rents, this increase is a reasonable assumption.

5 The specific proportions of families or consumption units found to have incomes inadequate to purchase minimum housing of course depend upon the particular grade of house selected and whether its rental is taken at a subsidised or a market rate, and on the relation between income and housing expenditure found in fact to exist.
In view of the tentative character of the foregoing analysis, the problem of adequacy of housing of Polish workers may be examined on the basis of data regarding overcrowding and housing facilities of all houses. The situation with respect to crowding is seen from the fact that according to the 1931 census 1 37 per cent. of urban dwellings and 51.5 per cent. of rural dwellings were composed of 1 room. The average number of persons per room in these dwellings was 3.9 in urban areas and 4.8 in rural. An additional 32 per cent. of urban dwellings were composed of 2 rooms, inhabited by an average of 2.3 persons, while two-room dwellings constituted 35.5 per cent. of rural dwellings and contained an average of 2.7 persons per room. Taking more than two persons per room as the definition of overcrowding, 45 per cent. of all urban dwellings and 72 per cent. of one-room urban dwellings were overcrowded 2.

The 1931 census also showed that for all urban dwelling houses, only 13 per cent. had sewer connections, 16 per cent. had running water, 38 per cent. had electricity, 7.5 per cent. had gas, while the combination of sewer connections and running water and gas or electricity were present in 10 per cent. of the dwelling houses. This means that 90 per cent. of the urban dwelling houses lacked the foregoing combination of facilities. The foregoing discussion has been illustrative of the use of data for the entire population. It may be legitimately inferred that most urban workers are found in the one and two-room dwellings whose characteristics were described above.

Comparable data for rural areas are not available, but it may be said in general that very few farm houses are equipped with any of these facilities. Legislation has recently been passed to improve the housing conditions of agricultural labourers 3. Housing conditions among small peasant proprietors are also to be improved in connection with the programme of agrarian reform under way in Poland 4.

In the urban areas certain groups of the population, particularly the unemployed, live in dwellings where the overcrowding, absence of furniture, and lack of facilities are particularly marked 5.

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1 In this connection it must be recalled that there was a post-war housing shortage in Poland and that in the decade 1921-1931 the population increase was not matched by a corresponding increase in housing construction. Therefore the figures for the 1931 census present a situation worse than that in 1921.


3 Thus a recent Decree requires that dwellings furnished to agricultural labourers and foresters with families must consist of at least one room of specific minimum dimensions and a smaller half-room. Single men and women labourers must be lodged separately. The Decree also contains specifications relative to the sanitary conditions of the dwellings.

4 Small proprietors on small holdings, with opportunities to pay for them over a period of years, are given long-term credits for construction of houses, according to a plan prepared by agrarian officials. Such houses consist of a separate dwelling for the family, a stable for the cattle, and a barn for the storage of crops.

E. Health

In the large cities of Poland death rates from pulmonary tuberculosis and pneumonia rank high, 13.4 and 10.4 deaths per 10,000 inhabitants respectively in 1936, being exceeded only by heart disease as a cause of death.

A total of 28.2 deaths per 10,000 inhabitants in cities of 100,000 population and over were due in 1936 to tuberculosis, pneumonia, or other diseases of the respiratory system, diphtheria, or dysentery.

Infant mortality, one of the most sensitive indices of adequacy of nourishment and general living conditions, was high. In 1936 the rate of infant mortality was 141 deaths during the first year of life per 1,000 live births.

F. Literacy

Compulsory primary education was established in Poland immediately upon the creation of the Republic after the war. The illiteracy figures show a sharp drop since 1921. In 1921, 33.1 per cent. of the population aged 10 years and over were unable to read and write, whereas in 1931 this figure had decreased to 23.1. The percentage was lower among the males, 17.8 as compared with 27.9 for the females. There were also sharp differences between literacy attainment in urban and in rural areas and in different parts of the country. Thus, only 12.2 per cent. of the urban population were illiterate, as compared with 27.6 per cent. for rural inhabitants. Certain differences are further reflected in the proportion of children enrolled in primary schools. The average enrolment in 1934-1935 per 100 children aged 7 to 13 inclusive ranged from 74.7 in eastern Poland to 99.3 in western districts; the central and southern districts were intermediate in this regard, with 90.8 and 92.1 per cent. respectively of children of primary school age enrolled as pupils.

III. — India

The problems of the standard of living in India are not comparable to those of the Western world. India is both from the point of size...
and the heterogeneous make-up of its people more truly a continent than a country. Included within the enormous extent of its area of 1,575,187 square miles, excluding Burma, are approximately 360 millions of people, or almost one-fifth of the human race.

As a result of deeply rooted social and mental attitudes the average Indian peasant is content to exert a minimum of effort and asks for little in return. In short, his scale of values is such that he has scarcely come to recognise the idea of raising standards of living as an objective of policy, thus making it impossible to judge his level of living by European or American standards.

The descriptive and statistical information which is available in India is of a scattered and incomplete character. Although an attempt has been made here to present as representative a picture as possible, the limitations of the data must be recognised.

A. INCOME AND EXPENDITURE

Wage rates and earnings vary widely between the different provinces and industrial areas of India. In 1929, wage statistics for several groups of semi-skilled workers showed that, whereas in Bombay Presidency only 13 per cent. of the workers earned less than Rs.17 1/2 per month, the corresponding percentages were 31 per cent. in Bengal, 47 per cent. in Madras and 53 per cent. in the United Provinces, thus showing that wage levels are considerably higher in the Bombay Presidency than in other areas in India. This fact must be kept in mind when considering the figures which follow, which have been taken from family budget studies carried out in the Bombay Presidency.

The most recent of these studies show that the average monthly income per family surveyed in Bombay City was slightly above Rs.50 in 1932-1933, in Ahmedabad about Rs.46 in 1933-1935 and Rs.40 in 1925 in Sholapur City. In these cities the average family size is about 4 persons, of which 1 1/2 to 2 are wage earners. As to the distribution of the families by income groups, the data show that the monthly income of over 60 per cent. of the families in Bombay and Ahmedabad ranged from Rs.30 to Rs.60, and in Sholapur from Rs.20 to Rs.50. The average monthly income per family in most of the other provinces varies between Rs.25 and Rs.35.

The following table shows by income groups the average monthly income and expenditure of families in Bombay City and the percentage of families in each group:

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nine major recognised languages but, in the Census of 1931, 225 languages were reported, without accounting for hundreds of dialects and social customs which at present clash on all sides with the industrialisation of the country and the introduction of Western methods.

1 A rupee equals about 1.60 Swiss francs at present exchange rates.


Ahmedabad, 1937.

Cotton Mill Workers in Sholapur, 1928.
### TABLE IX. — INCOME AND EXPENDITURE BY INCOME GROUPS, BOMBAY, 1932-1933

<table>
<thead>
<tr>
<th>Monthly income groups</th>
<th>Percentage of families</th>
<th>Average monthly income</th>
<th>Average monthly expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>Rs. a. p.</td>
<td>Rs. a. p.</td>
</tr>
<tr>
<td>Below Rs. 30 . . . .</td>
<td>12.25</td>
<td>25 3 8</td>
<td>27 9 7</td>
</tr>
<tr>
<td>Rs.40 and below Rs.40</td>
<td>20.22</td>
<td>34 3 3</td>
<td>34 11 7</td>
</tr>
<tr>
<td>Rs.40 &quot; &quot; Rs.50</td>
<td>26.21</td>
<td>43 4 3</td>
<td>41 9 1</td>
</tr>
<tr>
<td>Rs.50 &quot; &quot; Rs.60</td>
<td>16.27</td>
<td>53 3 5</td>
<td>48 6 9</td>
</tr>
<tr>
<td>Rs.60 &quot; &quot; Rs.70</td>
<td>10.01</td>
<td>63 1 8</td>
<td>55 15 5</td>
</tr>
<tr>
<td>Rs.70 &quot; &quot; Rs.80</td>
<td>5.24</td>
<td>73 3 4</td>
<td>62 4 3</td>
</tr>
<tr>
<td>Rs.80 &quot; &quot; Rs.90</td>
<td>4.08</td>
<td>82 15 8</td>
<td>70 4 11</td>
</tr>
<tr>
<td>Rs.90 and over . .</td>
<td>5.72</td>
<td>114 9 4</td>
<td>88 12 0</td>
</tr>
<tr>
<td>All incomes . . . .</td>
<td>100.00</td>
<td>50 1 7</td>
<td>45 15 9</td>
</tr>
</tbody>
</table>

The monthly expenditures of the Bombay families were distributed on the average as follows: 46.6 per cent. on food excluding liquor, 7.1 per cent. on fuel and lighting, 7.9 per cent. on clothing and household necessities, 12.8 per cent. on house rent, and 25.6 per cent. on miscellaneous items. With the exception of house rent and miscellaneous, the percentage expenditure on the different items showed little or no variation between income groups. However, as income increased, the percentage expenditure on house rent declined and that for miscellaneous items steadily increased.

The miscellaneous expenditures include items of both luxury and non-luxury goods and services not included in the other groups, but excludes interest on debt and expenditures for marriages, festivals, etc. The main items are tobacco, pansupari (a leaf and root chewed together), liquor and toddy, travel to and from native place, and payments to dependants. Expenditure on education and health is negligible and only about 25 per cent. of the families spend anything on amusements.

The expenditure on clothing remains more or less constant between income groups, as the demands of the workers in this respect are small and quite simple. Clothing requirements and customs vary according to climate, occupation and caste. No statistical information is available as to the amount of clothing owned by the worker, but general observations indicate that he often experiences considerable discomfort during the cold months because of insufficient clothing. As regards bedding, the majority of the workers possess little or none. However, most of them possess one or more string cots which are often kept outside the tenements for want of enough space in their overcrowded rooms.

From the above table it is seen that in the income groups above Rs.40 there is a surplus of income over the current expenditures. It is from this increment that interest payments on debt are made or extraordinary expenditure, such as marriages, festivals, etc., are met. In India the majority of the workers—both industrial and agricultural—are in debt for most of their lives. The Bombay budget study showed that 75 per cent. of the workers were in debt and that the average amount of indebtedness was about 3½ times their monthly income. Marriages and festivals account for the greater proportion of debt, as they are, by tradition and without reference to what the family can afford, usually
very elaborate and expensive. In Bombay, unemployment and sickness are reported to be the next most important causes of debt. The burden of interest payments throughout India is heavy and interest rates vary from 18.75 per cent. to 150 per cent., the most common rate reported being 75 per cent. per year.

B. DIET ADEQUACY AND MALNUTRITION

There is evidence that, under present agricultural conditions and methods of cultivation, India is barely able to supply enough food to ensure an adequate diet for the total population. During 1933-1934, the total acreage under food crops amounted to only 0.72 acres per head of population in British India and, according to agricultural experts, it is impossible to provide a satisfactory diet for the present population from an acreage of this dimension. In Madras Presidency, an attempt was made in 1933-1934 to calculate the food supply available and to assess its value in calories, etc., per consumption unit. This study suggested that the total calculated food supply was inadequate, both in quantity and quality, to cover the food requirements of the population of that Presidency. The diet of the Madras population is largely composed of cereals and shows a great lack of protective foods. The supply of protein is low and that of animal protein almost negligible. Milk production figures confirm the observation that milk is consumed in very small quantities or not at all by the mass of the population.

In 1936, diet surveys were carried out in several South Indian villages which confirm the conclusions of the above-mentioned study. These diet surveys covered both agricultural and non-agricultural families having varying incomes from Rs.50 to over Rs.500 per year. Judged by the standards of minimum requirements, it appears that all the families, except for a few in the higher income groups (Rs.350-500 per year), had an insufficient diet. The investigators stated that it was probable that from one-third to one-half of all the families did not consume enough food during the period of the investigation. The diets were expressed in the various dietary constituents which, when compared to either the recommended diet or to the minimum requirements, show that practically all the diets were inadequate or ill-balanced. The


3 The results of these surveys have been analysed for comparative purposes, on the basis of the minimum diet requirements as laid down by Dr. Aykroyd and his colleagues in the Nutrition Research Laboratories in Coonoor, South India. Very briefly, these recommendations are that, for an adult male in South India, doing moderate work, 2,600 calories, 65 grammes of protein, 60 grammes of fat, 0.60 grammes of calcium and 20 mgs. of iron are desirable. A recommended well-balanced diet is also given which, although falling far below dietary standards set for Western countries, is considered still too high for practical nutrition work, as Dr. Aykroyd states that in many parts of India it would be hard to find a worker whose diet reaches it.

preponderance of cereals and deficiencies in the protective foods were apparent. The protein intake was low and was almost wholly of vegetable origin. In general the diets showed serious deficiencies in vitamin content.

No expenditure figures were given for these diets, but food expenditure figures are available for industrial workers in Bombay City. Thus, inasmuch as nutrition studies in South India serve to indicate that in general the poor in the villages are often better fed and suffer less severely from malnutrition than do the urban workers, the food expenditure figures of the latter may serve to indicate the relation between food expenditure, diet and income levels in general. Food expenditures per month fall below the cost of the recommended well-balanced diet in Bombay with the exception of the higher income groups.

Diet surveys taken in Northern India indicate a relatively greater food consumption and, in general, more adequate diets. In a survey taken in Calcutta, the average calorie intake per adult male ranged from 2,400 to 3,800 per day. This compares favourably with the minimum requirements of 2,800 calories per adult male estimated to cover the daily energy needs of a North Indian worker. However, the diets investigated showed marked deficiencies in the same direction as the South Indian diets, namely in animal protein, animal fat, dairy products, calcium, and an excess of cereals. This study did not include the poorest classes, so it is quite likely that the calorie intake is much lower among a large proportion of the population as well. Similar deficiencies in animal fats and protein and protective foods were found in the diets of jute mill workers in Bengal in a survey carried out in 1930.

In India it is generally accepted that diet deficiency far outweighs other factors as a cause of malnutrition, so that the term "malnutrition" is used to cover defective development and pathological states resulting primarily from diet deficiency. Studies of the nutritional state of the poorer classes of India, especially of children, show the link between diet and health. Clinical examinations made, for instance, among the Madras Corporation Schools showed that during 1930 to 1934 some 20 per cent. of the boys were suffering from malnutrition. An investigation was made in 1936 of the state of nutrition of 2,003 day school children in three South Indian towns and it was found that over 21 per cent. showed definite clinical signs of malnutrition. The fact that malnutrition is definitely related to economic conditions was clearly evident in that symptoms were observed in a larger percentage of children of the poorer classes than of children of the more prosperous classes.

In the areas of North India where whole wheat is the staple cereal and relatively large quantities of milk are consumed, the state of nutrition is considerably better and symptoms of deficiency disease are

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5 It is interesting to note also that investigations of height and weight carried out in Ceylon and certain areas in India tend to indicate that height and weight are correlated with economic status and income (and hence with diet) and not with race. See Aykroyd, W. R., "Nutrition", referred to above.
infrequent in school children. However, diseases associated with vitamin D deficiency—rickets and osteomalacia—are met with 1.

C. Housing

Among the major causes of the urban housing problems in India have been the lack of control over the selection of sites intended for industrial development and the consequent additional overcrowding caused by the increasing immigration of workers seeking accommodation in the centre of cities already suffering from a shortage of houses. In many of the large cities, the limitation of space and high land values brought about by the pressure of an ever-increasing population add further to the congestion.

In the chief industrial areas of the Bombay Presidency, the dwellings in which the working classes are housed are of three main types: (1) sheds built of corrugated iron, empty kerosene tins, wood, etc., which are of a semi-permanent character and, for the most part, present very inadequate housing conditions; (2) "Zavli" sheds—huts usually constructed by the workers themselves of dry leaves from the date or coconut palms; and (3) "chawls" or buildings let in separate tenements. They are usually built in single or two-storied blocks, although they frequently run as high as five or six storeys, and consist largely of single rooms, sometimes, and increasingly so, of double rooms, but very seldom of more than two rooms. Inasmuch as the majority live in tenement buildings or chawls, more detailed consideration will be given to this type of housing.

Housing in India is marked by overcrowding. In the busiest industrial centres the houses are built close together, eave touching eave, and frequently back to back in order to make use of all available space. Space is so valuable that in place of streets and roads, narrow winding lanes provide the only approach to the houses. In Bombay City, the figures as reported in the Census of 1931 show that 33 per cent. of the population lives in rooms occupied by more than 5 persons at a time and 1 per cent., or 15,000 persons, in rooms occupied by 20 or more persons at a time. About 86 per cent. of Bombay's population is housed so inadequately that the streets have to be used to supplement the sleeping accommodations which the houses themselves cannot provide. Only 4 per cent. of the population live in conditions which ensure reasonable privacy and domestic seclusion 2. In addition to these conditions of overcrowding, goats and other domestic animals are often kept in a corner of the room or on the verandah 3.

Apart from considerations of space and overcrowding, conditions of sanitation, ventilation, light and water supply leave much to be desired in the housing of the working classes. During an enquiry covering 5,363 families in Bombay City in 1930 4, it was found that 59.26 per cent. of all the buildings surveyed provided only one window per tenement, 25.99 per cent. provided two, and 4.5 per cent. of the buildings had no windows. In regard to latrine accommodation, it was found that one latrine was provided for the use of 1 to 8 tenements in 89.33 per cent.

2 Census of India, 1931, Vol. IX, p. 89.
4 Ibid., pp. 891-893.
of the buildings, for 9 to 15 tenements in 8.35 per cent. of the buildings, for 16 tenements and over in 1.59 per cent., and no latrines at all were provided in 0.69 per cent. of the buildings. Similarly for water-taps, the report shows that one water tap was provided for the use of 1 to 8 tenements in 25.71 per cent. of the buildings, for 9 to 15 tenements in 40.41 per cent. of the buildings, for 16 tenements and over in 32.97 per cent., and in 0.87 per cent. of the buildings no water-taps are provided. Many cases were also reported in which water-pipes were out of order or the water did not reach the upper floors owing to insufficient pressure in the municipal water-mains. It will be noted that these figures for both the number of latrines and the number of water-taps are per tenement and not per family or per person. Thus, when the conditions of overcrowding are considered in conjunction with these figures the availability of such conveniences for the individual appears to be very small.

In regard to general housing conditions in other industrial sections of India, available information indicates that conditions vary little from those in the Bombay Presidency.

The housing of the workers in the urban industrial areas is said to be no worse than that in the villages. The houses in the villages are dark, unventilated and insanitary, but the rural worker has certain material benefits such as light, fresh air, and a certain degree of privacy.

D. Health

One of the basic indications of health conditions is presented by the variations of the mortality rates. In 1933 the reported birth rate was 36 per thousand and the death rate was 22.4 per thousand. The rates for India are among the highest in the world. Over 45 per cent. of the total deaths were among children below 5 years of age and, although the general death rate has been decreasing, the infant death rate has been increasing and in 1933 was 171 per thousand live births. The fact that the urban rate is much higher—210 per thousand—is most likely a reflection of the overcrowding and poor housing conditions.

The chief causes of mortality in India are fevers, respiratory diseases, and dysentery and diarrhoea combined, the respective rates per thousand in 1933 being 12.9, 1.6, and 0.9. Owing to poor diagnosis, the “fevers” group is undoubtedly overstated, but malaria accounts for the majority of deaths under this head and presents a serious public health problem in India to-day. Tuberculosis ranks next to malaria in this respect and shows a steady increase in incidence; as urbanisation progresses there is a steady diffusion of the disease throughout the country. Other diseases which showed a high incidence were cholera, plague, smallpox and influenza. Plague has lost much of its former importance and the cholera death rate in 1933 was unusually low.

The close connection between health, housing and sanitary conditions is clearly shown by the high rates for respiratory disease and dysentery and diarrhoea in the urban areas. It is clear that in India the congestion and overcrowded housing conditions, and the unhygienic habits and customs of the people all go towards creating conditions which spread infection.

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E. Literacy

Over 90 per cent. of all the people in British India aged 5 years and over are illiterate—i.e. unable to read and write an intelligible letter in any language. Literacy conditions are better in the cities, as in Calcutta only 57 per cent. were illiterate and in Bombay 73 per cent. In 1936, of the total boys of school-going age (6 to 11 years) who should be in primary schools, 51 per cent. were enrolled, while the percentage of girls was only 17 per cent. Of every 100 boys that were enrolled only 27 reached the end of the primary course and of the girls only 14 per cent.

IV. Japan

Problems of living conditions in Japan have been the subject of considerable interest both within and outside of Japan in recent years. It is to be recognised, as in the case of the other countries studied, that these problems must not be extracted from their setting and judged in relation to those of Western countries. The fact that modern Japan has risen within the past 70 years from an ancient civilisation involving customs and habits of life totally different from those of the Western world creates special characteristics which must be kept in mind when considering present-day standards of living. The examination of living conditions in Japan is made here in accordance with Japanese standards of comparison, on the basis of physiological and social norms set up in accordance with the simple tastes and frugal mode of living of the Japanese.

A. Income and Expenditure per Family

With respect to the frequency and continuity of its family budget enquiries, Japan takes a high place not only in the East, but in the world as a whole. Figures from the latest of these enquiries show that

3 For a fuller discussion of conditions in India and of the problem of raising standards in that country, see BUTLER, Harold: Problems of Industry in the East. (Studies and Reports, Series B, No. 20.) International Labour Office, Geneva, 1938.
4 Japan proper covers 382,545 square kilometres, which are divided among several small and mountainous islands. In the past 65 years the population of these islands has trebled and in 1935 was 69,254,418 or 181 persons per square kilometre—forming one of the densest population areas in the world. With the introduction of industrialisation and its very rapid growth in recent years, the pace of urbanisation has been increased and the rate of growth of cities has been over twice that of Japan proper. In 1935, there were 34 cities having a population of 100,000 or over, four of which had over 1,000,000 inhabitants. Over 48 per cent. of the gainfully occupied are reported to be engaged in agriculture.
in 1935-1936 the average monthly income of about 1,100 urban wage earners' households was about 87 yen\(^1\) and that about 40 per cent. of the households investigated had a monthly income of less than 80 yen. On the average, the earnings of the head of the household represented about 89 per cent. of the total and about 4 per cent. was derived from the earnings of women and children in the family and about 7 per cent. from other sources.

With regard to family expenditure, the enquiry shows that the average monthly expenditure for all families was 81.14 yen, thus allowing a surplus of 5.85 yen. This excess of income over expenditure varied directly with the amount of income; for the lowest family income group (less than 50 yen) a deficit of 5.34 yen was shown. The relative expenditure for food was on the average 37.34 per cent., for miscellaneous expenditures 32.15 per cent., housing 15.32 per cent., for fuel and light 4.62 per cent., and for clothing 10.57 per cent. For the family income group of less than 50 yen, in which a deficit was shown, food expenditure amounted to 45.68 per cent. of the total expenditure and miscellaneous expenditures amounted to over 22 per cent. The other expenditure items showed relatively small variations as between family income groups.

**B. Income and Expenditure per Consumption Unit**

When account was taken of the number and age of persons dependent on family income, it was possible to compute for the year 1931-1932 the following distribution according to income per consumption unit for 992 wage earners' families in 10 cities in Japan:

**TABLE X**

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<table>
<thead>
<tr>
<th>Total family income in yen per year per unit</th>
<th>Cumulative percentage of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Families</td>
</tr>
<tr>
<td>Up to 100 . . . . . . . . . . . . . .</td>
<td>0</td>
</tr>
<tr>
<td>&quot; 150 . . . . . . . .</td>
<td>0.8</td>
</tr>
<tr>
<td>&quot; 200 . . . . . . . .</td>
<td>9.2</td>
</tr>
<tr>
<td>&quot; 250 . . . . . . . .</td>
<td>19.3</td>
</tr>
<tr>
<td>&quot; 300 . . . . . . . .</td>
<td>48.7</td>
</tr>
<tr>
<td>&quot; 350 . . . . . . . .</td>
<td>63.8</td>
</tr>
<tr>
<td>&quot; 400 . . . . . . . .</td>
<td>78.4</td>
</tr>
<tr>
<td>&quot; 450 . . . . . . . .</td>
<td>88.2</td>
</tr>
<tr>
<td>&quot; 500 . . . . . . . .</td>
<td>91.4</td>
</tr>
<tr>
<td>Total . . . . . . . . . .</td>
<td>100.0</td>
</tr>
</tbody>
</table>

---

\(^{1}\) **Source**: Computed from data presented in the family budget study for 1931-1932. The published table gave a distribution of families according to 7 monthly family income groups, (current income, i.e. not including changes in assets and liabilities) in intervals of 10 yen per month, namely under 50, 50-59, 60-69, etc., to 100 and over. Within each income group there was a further distribution of families according to number of members in household (ranging from 2 to 7 inclusive) and indication as to how many of these were children below 14 years of age. In making the computation each family within a given income interval was treated as though it had the average income of that interval, and each child under 14 was counted as one half-unit and each person of 14 or over as one unit. Annual income was obtained by multiplying monthly income by 12.

\(^{2}\) 1 yen equals about 1.25 Swiss francs at present exchange rates.
The median family income per unit shown in the preceding table, slightly over 300 yen, is higher than the corresponding figure for all urban Japanese families, the exact size of which is not known 1.

The recent Japanese budget studies do not present data on expenditure per consumption unit. In 1926-1927, however, the basic data on expenditures were presented according to family income further subdivided according to family size. This classification made possible a calculation of food expenditure per consumption unit, following methods similar to those used in the computation of data shown in table X. For later years published data were limited to average food expenditure per family in each family income class, and the number of families of each size in each income class was given but not their corresponding food expenditures. A means of approximating these food expenditures was made possible by a characteristic of the analysis for 1926-1927: this was, that the relative deviations in 1926-1927 from the average food expenditure in each family income class as calculated separately for families with 1, 2, 3, 4 and 5 children were found to be remarkably stable for each family size, irrespective of income level. These relative deviations (as

1 The families selected for inclusion in the budget studies by the nature of the requirements of the investigations were somewhat above the average in income: they were families of employed workers with incomes of at least 50 yen per month per family, with at least 2 and not more than 7 members of the household and with no boarders or lodgers, who were willing to keep accounts for a twelve-month period. Comparison of the frequency of family sizes included in the budget study of 1931-1932, with those shown in the census for 1930 (excluding those of less than 2 or more than 7) showed an under-representation in the budget sample of family sizes associated with the lower incomes per unit.

For Kumamoto, a city of 172,000 inhabitants (closely similar in size to the seventh, eighth and ninth largest of the 10 cities included in the budget study), data are available regarding a distribution in the fiscal year 1931-1932 of all households in the city according to their payment of the household rate tax, a municipal tax which is in effect a family income tax. The same deductions were made from incomes of families included in the budget study for 1931-1932 for dependants and for size of income as allowed in assessments of the tax in Kumamoto. When the two family income distributions were thus put on a comparable basis, it was found that the median family income in Kumamoto was slightly under 300 yen per family per year, while in the family budget study for the same year it was slightly under 600 after deductions in accordance with tax regulations (Professor S. SHIOMI: "Survey of the Distribution of the People's Income in the Light of the Household Rate", Kyoto University Economic Review, July 1933, p. 36).

The average annual income per family for the total Japanese population in 1930 was estimated by Professor Kawada to be 809 yen, as compared with a figure of approximately 1,000 yen for the families in the budget study in 1931-1932 (Shiro KAWADA: "The Income and Living Conditions of the Agrarian Population in Japan", Journal of the Osaka University of Commerce, No. IV, Dec. 1936, p. 3).

Finally, the degree of continuity and stability of the successive budget samples from 1931-1932 to 1935-1936 warrants the conclusion that the samples for later years as well as that for 1931-1932 over-represent the higher income per unit families and under-represent the low ones. Any statement, therefore, of the percentage of families in the budget samples having incomes inadequate to meet a certain norm is undoubtedly an under-statement rather than an over-statement for the urban population as a whole. Regarding the total population, including agricultural families, the situation cannot be judged accurately, but it may be said that Professor Kawada (op. cit.) estimated the total family income of the rural population in 1930 to be 336 yen on the average, as compared with about 1,000 for the budget sample in 1931-1932.
found in 1926-1927) were then applied to the average food expenditure in each family income class for 1935-1936, to obtain the estimated food expenditure for families of each size in each family income class. The results so obtained were compared with the estimated cost of a specimen diet as detailed in the ensuing section.

C. Food Consumption

As in other countries in the East, rice constitutes the most important item in the Japanese diet. Other cereals included in the diet are barley, wheat, millet, "kibi" and "hie", which are sometimes supplemented by potatoes and corn. Likewise, vegetables and fruits, fish and meat, besides various sea products, are served with rice but, in general, the average diet is deficient in vegetables, fruits and animal products—especially dairy products.

The most obvious method of testing the adequacy of food consumption consists in evaluating the actual diet in terms of the various nutritional constituents (e.g. proteins, carbohydrates, vitamins, etc.) of the quantities consumed per "unit" and comparing the result with some agreed norm. Unfortunately, however, the more recent Japanese family budget enquiries do not give figures for the quantities of the various foodstuffs consumed, and this method of physiological evaluation had thus to be discarded.

Another less satisfactory method consists in evaluating at current retail prices the money cost of a set of food quantities that (1) contain all the nutritive elements required in a physiologically well-balanced diet, and (2) is adjusted to the consumption habits of the people in question. By comparison of the actual food expenditures per consumption unit incurred by the families studied with the money amount thus computed, an approximate measurement of the adequacy of their food consumption may be obtained. In spite of the many recognised shortcomings of this method, this is the only method whose application is possible in the case of Japan.

As a basis of computations, the dietary standards recommended by the Institute of Nutrition of Japan have been used. These standards are expressed in calories and proteins by age levels. Very briefly put they allow for 80 grammes of protein and 2,400 calories per day per consumption unit. By an analysis of a diet recommended by the same Institute for nutrition work among the peasant population, it is possible to determine the respective quantities of fats and carbohydrates (namely, 29 grammes of fat and 447 grammes of carbohydrates per consumption unit) considered to be sufficient to meet the energy needs of an adult Japanese engaged in moderate work. The average cost in 1936 in the cities included in the family budget enquiries of a diet fulfilling these requirements was computed to be about 21 sen per consumption unit per day.

2 Sonraku eijo kaizen jisshi hokoku. (Report of experiences in nutrition work among the rural population.) Published by the Dept. of Gumma, 1933, p. 151.
3 In order to determine the approximate cost of such a diet, a list of actual foods yielding the proper proportions of these dietary requirements were
Comparing the estimated food expenditures per unit, explained in the previous section, with the cost of such a diet, it is possible to estimate the proportion of families with sufficient and insufficient food expenditure or to construct an index of the adequacy of food expenditure. Table XI gives the results of these calculations, for 1,107 wage earners’ families in 10 cities in Japan in 1935-1936.

TABLE XI. — DISTRIBUTION OF FAMILIES, PERSONS AND CHILDREN
ACCORDING TO INDEX OF FOOD ADEQUACY

| Index of food adequacy (per cent of estimated actual food expenditure per unit to weighted average cost of specimen diet) | Cumulative percentage of
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Families</td>
</tr>
<tr>
<td>80 to 90 . . .</td>
<td>0.7</td>
</tr>
<tr>
<td>&quot; 100 . . .</td>
<td>9.6</td>
</tr>
<tr>
<td>&quot; 110 . . .</td>
<td>25.0</td>
</tr>
<tr>
<td>&quot; 120 . . .</td>
<td>45.6</td>
</tr>
<tr>
<td>&quot; 130 . . .</td>
<td>65.0</td>
</tr>
<tr>
<td>&quot; 140 . . .</td>
<td>78.2</td>
</tr>
<tr>
<td>&quot; 150 . . .</td>
<td>83.9</td>
</tr>
<tr>
<td>Total . . .</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The results of these various computations show that the average number of children, as well as of persons, per family diminishes with increasing income per unit and that the diet improves steadily with

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1 The amounts spent for food in the budget sample were not analysed separately by cities, hence the question arises as to the best weighted average minimum cost of the diet to be used for comparison with these figures. The most reasonable procedure, since the data for the budget sample are an average for the 10 cities, is to use a weighted average (the total cost of the diet in each city weighted by the number of families in the budget sample for that city). It is, of course, possible that the sums spent on food by a household in cities with lower than average costs may in fact have exceeded the cost in those cities, although it was below the average cost for the 10 cities; and in this event the family would be classified as not having sufficient food expenditure; but it is assumed that such cases are balanced by those of households in the cities with higher than average costs which actually spent less than the minimum required in those cities but higher than the average for the 10 cities.

2 The amounts spent for food in the budget sample were not analysed separately by cities, hence the question arises as to the best weighted average minimum cost of the diet to be used for comparison with these figures. The most reasonable procedure, since the data for the budget sample are an average for the 10 cities, is to use a weighted average (the total cost of the diet in each city weighted by the number of families in the budget sample for that city). It is, of course, possible that the sums spent on food by a household in cities with lower than average costs may in fact have exceeded the cost in those cities, although it was below the average cost for the 10 cities; and in this event the family would be classified as not having sufficient food expenditure; but it is assumed that such cases are balanced by those of households in the cities with higher than average costs which actually spent less than the minimum required in those cities but higher than the average for the 10 cities.

---

estimated on the basis of specimen diets of the Institute of Nutrition, taking reasonable account of local tastes and food habits. This list of foods was priced for each of the cities covered by the budget enquiries according to prices published for 1936 by the Ministry of Commerce and Industry. (For three cities for which retail price quotations were not available, prices were used for three substitute cities which were nearest geographically and closest in size.)
increasing income per unit. In the group spending for food less than the estimated cost of the adequate diet and, therefore, probably unable to maintain health and efficiency in the long run were 10 per cent. of the families, 13 per cent. of the persons and, more seriously, 16 per cent. of the children below 14 years of age. It is not possible to say how much margin should be allowed for irrationality in spending or inefficient marketing, to say nothing of cooking efficiency. If, however, a small margin—say 10 per cent.—be added to the cost of the adequate diet to allow for these factors, the proportions spending less than this amount come to 25 per cent. of the families, 32 per cent. of the persons and 37 per cent. of the children.

It must be emphasised that the foregoing calculations are very rough and are subject to important limitations. Nevertheless, it seems quite likely that the percentages of families and of children spending for food less than 10 per cent. above the cost of this diet had a food intake which, in the long run, would not guarantee the maintenance of either normal working efficiency or of health.

It must further be pointed out that the budget sample is made up of families which are relatively better off than the urban population as a whole. It is particularly the frequencies in the lowest consumption unit income groups that are under-represented in the budget sample, whereas the frequencies in the higher income groups are over-represented. Therefore, if the figures in table XI were based on total urban families, the figures would be higher in the lower adequacy groups.

D. Housing

In summarising housing conditions in Japan, a housing standard which allows a minimum of comfort by Japanese standards has been selected. This standard is based on the plan followed by the Dojunkai Association in slum-clearance programmes. In 1927, the Dojunkai Association, founded in Tokyo in 1923 and subsidised by the State for the reconstruction of slum areas destroyed in the great earthquake of 1923, carried out a slum-clearance programme in Yokohama and the houses were reconstructed according to the following plan:

<table>
<thead>
<tr>
<th>Number of persons per household</th>
<th>Number of rooms</th>
<th>Number of mats</th>
<th>Floor space in square feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 or 2</td>
<td>4½ or 7½</td>
<td>79.3 or 133.2</td>
</tr>
<tr>
<td>2-3</td>
<td>2</td>
<td>7½</td>
<td>9</td>
</tr>
<tr>
<td>4-5</td>
<td>2</td>
<td>9</td>
<td>10½</td>
</tr>
<tr>
<td>6-7</td>
<td>2</td>
<td>13</td>
<td>239.8</td>
</tr>
<tr>
<td>8 and over</td>
<td>3</td>
<td>177.6</td>
<td></td>
</tr>
</tbody>
</table>

A mat is used in Japan as the unit of measurement of floor space in houses and also as the basis for determining rents. It is a rectangular shaped rug about 2.98 feet in width and about 5.97 feet in length covering thus about 17.79 square feet. The floors of Japanese homes are usually completely covered by these mats.

This housing plan was set up primarily to meet the minimum requirements of the poorest classes of the urban population as the new structures

---

were reoccupied by the former tenants. Although these plans were designed to meet the minimum requirements of an urban dweller, it must be pointed out that all the buildings included, apart from the rooms, an equipped kitchen, a store-room, a drying-room, running water and gas. On the other hand, as is the case in most Japanese houses, no special means of heating were provided.

In converting this standard into terms of the rent required to meet it, it has been necessary to use the family budget enquiry of 1926-1927, as it is the only enquiry which includes data relative to rents per mat for dwellings by income groups. Thus, an average has been taken of the rents per mat for all the dwellings covered by this enquiry, including those of salaried employee households. Then by multiplying this average by the number of mats indicated in the plan of Dojunkai, the following rent standards have been determined:

Yen
Average rent per mat ........................................ 1.12
Rent standard for a household of:
1 person .................................................. 5.04 or 8.40
2-3 persons .............................................. 8.40
4-5 persons ............................................ 10.08
6-7 persons ........................................ 11.76
8 persons and over .................................. 14.56

In analysing the data relative to rent expenditure of the families by income groups and by the size of family, it has been possible to determine the frequency of households according to the housing conditions for four classifications of households which vary according to the number of persons per family as shown in the following table:

**TABLE XII. — PERCENTAGE DISTRIBUTION OF HOUSEHOLDS (1926-1927) ACCORDING TO THE DEGREE OF ADEQUACY**

<table>
<thead>
<tr>
<th>Indices of housing adequacy</th>
<th>Households having the following number of persons:</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2-3</td>
<td>4-5</td>
</tr>
<tr>
<td>80-90.</td>
<td>7.5</td>
<td>24.4</td>
</tr>
<tr>
<td>90-100.</td>
<td></td>
<td>13.2</td>
</tr>
<tr>
<td>100-110.</td>
<td>23.8</td>
<td>16.7</td>
</tr>
<tr>
<td>110-120.</td>
<td></td>
<td>8.4</td>
</tr>
<tr>
<td>120-130.</td>
<td>32.4</td>
<td>12.5</td>
</tr>
<tr>
<td>130-140.</td>
<td></td>
<td>8.4</td>
</tr>
<tr>
<td>140-150.</td>
<td></td>
<td>16.5</td>
</tr>
<tr>
<td>150-160.</td>
<td>20.0</td>
<td>3.2</td>
</tr>
<tr>
<td>160-170.</td>
<td>7.4</td>
<td>1.6</td>
</tr>
<tr>
<td>170 and over</td>
<td>8.9</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Thus from the table it can be seen that for households of 2 to 3 persons, 7.5 per cent. of the households belonging to this group are below the norm; and for households of 4 to 5 persons, 37.6 per cent. are below the norm; for households of 6 to 7 persons, 51.5 per cent.; and for households having 8 or more persons, 61.9 per cent. are living in conditions below minimum requirements. Thus, the percentage shows a steady increase as the number of persons per household increases. Of the total of all
workers' households included in the enquiry, 29.7 per cent. are classed below the standard of minimum requirements.

However, in studying the table it is necessary to have the following facts in mind: (1) The percentages relate only to wage earners' households (i.e., textile, mine and transport workers and day labourers). (2) The figures do not include households composed of single persons, for reasons relative to the method of enquiry. (3) As was shown in the discussion of income, there is a tendency towards an over-statement of frequencies of households in the higher income groups and, therefore, a relative under-statement of the frequencies of those in the lower income groups. (4) In calculating the rent standard from the rents per mat for all households included in the enquiry, those of salaried employees have been included as well. Inasmuch as the rents paid by the latter tend to be higher than those paid by the wage earners' households, the rent standard is somewhat higher than it would be if based on the rent paid by the wage earners' households only.

In view of these facts, caution is necessary in using the table and the figures are offered only in so far as they do give, in an approximate manner, some indication of housing conditions in the urban areas of Japan.

E. Health

Birth and death rates in Japan, although showing a tendency to decrease, continue at relatively high levels. The birth rate went down after the peak year of 1920 until 1935 when it rose to 31.6 per 1,000, keeping above that of most other countries and contributing considerably to the problems resulting from a rapidly increasing population. However, the death rate shows a gradual, but steady, decline, and in 1936 was 17.51 per 1,000 compared with 18.98 in 1931 and 19.2 in 1926. It is interesting to note that the rural death rate is higher than the urban rate in Japan. In 1934, the urban death rate was 16.00 per 1,000 while that for the rural districts was 19.07. It is also noted that, although both rates are declining, the urban rates show a more rapid decline than the rural. The infant mortality rate in 1936 was 117 per 1,000 as compared with 131 in 1931 and 137 in 1926.

One-tenth of the total number of deaths in Japan is due to tuberculosis and it is estimated that over 1,000,000 persons are suffering from the disease. Its incidence is especially high among the young people of the country and in 1935 the number of deaths from this cause was 132,151 or about 2.0 per 1,000, showing an increase over 1934 of almost 1,000 deaths. Besides tuberculosis, the other most frequent causes of death in Japan are cerebral haemorrhage and embolism, diarrhoea and enteritis, and pneumonia. Each of these three causes accounted for 9 to 10 per cent. of the total deaths in Japan in 1935.

In an attempt to determine the extent of sickness in the country, the Nippon Ishikai (the Japan Physicians' Society) carried out a survey of medical conditions in 1936 by collecting reports from its members. On the basis of the survey it was estimated that over 2,044,000 persons visited doctors on 10 October 1936, the day of the survey. This number forms 2.9 per cent. of the total population in Japan proper.

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1 Bureau de statistique du Cabinet: Dai Nippon Teikoku Tokkei nenkwan (Résumé statistique de l'Empire du Japon), Tokyo, 1937. See also: The Japan Year-Book 1937. Published by the Foreign Affairs Association of Japan, 1937, pp. 829-831.
It is important to note that the percentage of female patients to the total female population was 2.5 as compared with 3.3 of male patients.

F. Literacy

As a result of the enforcement of compulsory education and also of the eagerness of the people for education, school attendance is almost 100 per cent. in Japanese primary schools. In 1935, there were 11,150,824 children of school age (6 to 14 years) and of these 11,103,920 or 99.58 per cent. were reported to be in attendance.

The problem of illiteracy is practically non-existent in Japan. Complete data on literacy are not given, but figures showing the educational standing of military conscripts give some indication of the extent of illiteracy in Japan. According to the figures for 1936, among 630,882 conscripts only 2,044 or 0.32 per cent. did not know how to read and write. These figures relate only to males, but as a result of the compulsory system it is expected that the same rate would apply in a general way to females as well.

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1 Résumé statistique de l'Empire du Japon, op. cit.
It may be useful to review briefly the discussion of the preceding chapters and to summarise the evidence presented of low levels of living.

It was pointed out, to begin with, that if standards of living are to be the subject of economic and social policy, it is necessary to define them in objective terms and to give them, as much as possible, a quantitative content. The definition of the standard of living adopted in this Report, without minimising the importance of subjective well-being, stresses such objective elements of welfare as income, consumption, social services and working conditions. These elements of the standard of living are measurable to a considerable extent. Thus, the money incomes of persons, families and groups can be appraised, and the quantity, weight, chemical composition and calorific and nutritive values of foods can be assessed. It is less easy to establish objective norms for such items as housing, clothing, health services, education, but in practice minimum standards with regard to these items are formulated in different countries, on the basis of national and local conditions, which acquire validity as they are gradually accepted by public opinion and are incorporated in social legislation.

It was found, further, from a survey of existing material that the data needed for a description and evaluation of workers' living standards are incomplete and that in many countries even the simplest facts are not available, or are presented in a form difficult to use. Nevertheless, it was indicated how family budget enquiries and other statistical data may be and have been used, at least in the most important industrial countries, for approximate descriptions of standards of living among the working population of these countries.

Finally, in Chapter III, a partial survey of actual levels of family living was presented for four countries—the United States, Poland,
India and Japan. As already indicated, this survey was not intended either as a comprehensive analysis of living conditions of the workers in the countries considered or for purposes of comparison. It was primarily an illustration of method in using available materials for the study of the problem. In presenting the data, only four elements in the workers’ standard of living were taken into account—food, housing, health and literacy. These elements serve to indicate in an objective manner the content of living, especially at the lower income levels. Other elements such as clothing, working conditions, leisure and recreational facilities, and social services were not considered, despite their basic importance. Furthermore, in setting up norms even for nutrition and housing in the selected countries, certain qualifying assumptions and reservations were necessary owing to the limited character of available data. Nevertheless, despite the limitations of the data and the complexities of the problem, certain broad generalisations emerge from the survey which it may be helpful to restate briefly.

With regard to nutrition, it is seen that varying proportions of the population of the world have an insufficient diet when measured not only by the London standards but even by the tentative norms adopted by the various countries. As income per consumption unit in the family rises, especially at the lower income levels, food consumption increases and the diet shows a tendency to become more varied and better balanced. However, diet adequacy is affected also, and to an increasing extent as family income increases, by food habits, tastes, and knowledge in the purchase and utilisation of foods.

The analysis of housing conditions likewise shows that varying portions of the population are inadequately housed when judged even by the minimum standards set up in the different countries. Inadequate housing is in large measure also related to low earnings and to insufficient family income. But the evidence presented shows that poor housing conditions and overcrowding are related also to the rate of increase of the population and its distribution, and to general habits of social life which are influenced in large measure by education.

Public health and literacy statistics show clearly the wide variations in birth and death rates, disease incidence, and illiteracy. The evidence points to the close interrelation between low nutritional and housing conditions and variations in conditions of health.

In general, the survey made in Chapter III suggests that the
level of family income and the size of the family are the chief
determinants of the workers' standard of living. It is among the
groups with the lowest family incomes that the lowest levels of
living are found. The intensity of poverty at the lower income levels
is greatest since the largest families are found consistently in the lower
per unit income groups. In other words, there is a greater concentra­
tion of consumption units than of families at the lower per unit income
levels—the largest number of children being in those groups where
food consumption and living conditions are the most unsatisfactory.
Malnutrition, overcrowded dwellings, disease incidence and
illiteracy are all more prevalent at the lower income levels.

The facts of this Report tend to reinforce and to sharpen convic­
tions already widely held concerning the prevalence of poverty and
low standards of living and the need for considering economic and so­
cial policies to improve existing conditions. Obviously, plans of action
can be laid more effectively only on the basis of more complete
knowledge than we now possess of the facts concerning the char­
acter and causes of low living standards in each particular country.
This opens up a wide field for enquiries to fill the gaps in our infor­
mation pointed out in Chapter II and to ascertain the nature of low
standards along the lines indicated in Chapter III. The incontest­
able facts concerning the inadequacy of nutrition, housing, etc.,
clearly point to the need for studying the possibilities of increasing
output and the productiveness of human labour, especially in
the poorer countries, as well as of investigating the methods of
ensuring a better distribution of the product. However, while
the main reason for low living standards in most parts of the
world is poverty, an improvement in conditions of living
depends also upon a clearer understanding of the part played
by education and by social customs in determining the
worker's standard of living. Furthermore, as the social services
are in most countries an important factor in determining health,
earning capacity and security, the possibility of extending these
services is a basic question for further study. Also in view of the
fact that in countries with a rapid rate of population growth,
measures for the improvement of health and social conditions
may result in an even more rapid rate of population increase and
therefore in increased population pressure, it is of importance to
pursue the study of problems of the "optimum" population for
each country and of questions connected with the most effective
distribution of the world's population. Last, but not least, there
are the problems involved in protecting existing standards against
the threat of severe economic depressions and against the dislo­
cations due to rapid technical and structural changes in industry
and trade.

In general, the preliminary study made here suggests that the
relations between the various determinants of the workers’ stan­
dard of living are complex and that the pattern differs considerably
between countries. It is clear that this pattern depends not only on
the stage of development of the national economy, but also on
national habits and traditions. There is thus a large field here for
social-economic research which would throw light on the nature
of the determinants of the worker’s standard of living in particular
countries, and on the relation of these determinants to problems of
international co-operation.