UNITED NATIONS
ECONOMIC AND
SOCIAL COUNCIL

STATISTICAL COMMISSION
Ninth session
Item 12 of the provisional agenda

STATISTICS OF THE DISTRIBUTION OF INCOME
(Memorandum prepared by the Secretary-General)

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INTRODUCTION

1. At its seventh session, the Commission requested a report on the practice of countries in preparing statistics on the distribution of income by size and by socio-economic groups. At its eighth session, the Commission considered the report of the Secretary-General (E/CN.3/184) and in order to have more information available requested the Secretary-General to collect detailed information on the experiences of countries in the preparation of income distribution statistics. This report is in answer to that request.

2. The importance and need for statistics on the distribution of income have often been stressed by international bodies. The International Labour Office has called attention to the importance of statistics on individual and family income in connexion with its studies of worker's level of living.\(^1\) In 1950 the General Assembly in resolution 403 (V) stated, "... it is desirable that the under-developed countries should have knowledge of their national income and its distribution". In 1951 the Economic and Social Council adopted resolution 369 (XIII), in which it requested the Secretary-General to encourage the preparation of basic statistics in both developed and under-developed countries so as, "... to take into account the existing differences in the economic and social structure of the countries concerned". In the Preliminary Report on the World Social Situation\(^2\) the relation of income statistics to various social statistics was stressed, and the inadequate and scanty nature of existing data noted. In the Survey of Social Statistics\(^3\) the use of income-size statistics of individuals and families was noted as being important for social as well as economic studies. They were also described as being of greater usefulness if classified by social and economic groups.

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I. SCOPE AND OBJECTIVES

3. The principal purpose of this paper is to provide a review of country practices in the preparation of basic statistics of income distribution. By basic statistics are meant the collection of primary data by such methods as censuses, and sample surveys of the population and the tabulation of income, wage or social insurance tax returns. It is not concerned with the development of the more comprehensive measures of income distribution through the analysis and integration of primary statistics. While primary emphasis is given to distributions of income by size attention has been directed to distributions of income and income receivers in terms of other socio-economic characteristics.

4. A secondary aim is to set forth some limited recommendations for international guidance in this work. Guidance rather than inter-country comparability is stressed since before the latter can be achieved there would appear to be need of considerable experimentation in the choice of methods and definitions. The recommendations included are primarily intended to improve existing practices in the preparation and publication of income distributions so as to make them more useful to the user rather than to aim directly at international comparability. Certain aspects of comparability should be relatively easy to achieve to the extent that common definitions and terminology can be employed which are meaningful in terms of the social and economic structure of the countries being compared. Thus, for example, percentage distributions of income may be compared for certain broad characteristics such as urban-rural, farm-non-farm, and for major occupational groups. Comparison of income distributions by income size involves the definition of the income unit being distributed. The interpretation of such comparisons depends in large measure on the structure and organization of the family or other spending or consumption unit. It also depends on the relationship between private spending and total consumption or to state this another way between the volume of consumption goods provided privately and publicly. Nevertheless it would appear that meaningful comparisons can be made of income-size distributions if the data are available for ranking as is the case when the percentiles are used. Comparison of income distributions by size and other characteristics has
all the handicaps of international income comparisons, including that of the exchange rates to be used in converting local currencies.

5. The term income distribution statistics has often been used to refer to distributions of (a) functional shares or types of income, (b) income by industry of origin, (c) the number and amount of incomes of individuals or families by size of income, and (d) income and the number of receivers by other socio-economic characteristics. Distributions of income by functional shares and industry of origin have long been an integral part of national income statistics both conceptually as well as in terms of measurement. This report is limited to statistics of income classified by size and other socio-economic characteristics of the recipients. While the distribution of income by size is most interesting and important it is only one of a number of useful characteristics used in classifying income receivers. Some of these are age, sex, geographical area, marital and employment status, family or household composition, occupation and industrial attachment.

Some Factors in the Development of Income Distribution Statistics

6. The analysis of income distribution in terms of functional shares, i.e., wages, rents, profits, etc., has long occupied a central place in economics. In addition to these shares being regarded as the reward of the factors, labour, land and capital they have at times been regarded as measuring income distribution by socio-economic groups. This over-simplification in the assumed identity between the economic shares and the relevant groups in the population as an indication of welfare has likely been a stimulant for the development of a distribution by size classes.

7. Much of the early work on income distribution was directed to an analysis of the contrast between wealth and poverty. The statistical basis was in general fairly crude. One approach dealt mainly with the upper end of the size distribution owing perhaps to a lack of data having a wide coverage. Considerable efforts were made to develop generalized formulas to describe the distribution of income by size and theories advanced to account for the apparent similarities in the shape of the distribution. Most of this work has been mainly of an a priori character perhaps owing in part, to the
limitation of the information to relatively crude data on size distributions frequently available for only the higher income recipients.

8. While income distributions have continued to be used for analysing and comparing welfare it has been recognized that they present an over-simplified picture of the differences in economic well-being of the individuals in the population. Efforts to adjust the crude size distributions of individual incomes for such factors as dependency status, family needs, price changes, etc. have called for a considerable elaboration of the data. This appears to have increasingly taken the form of cross-classifications of the income size data with such socio-economic characteristics as age, sex and number of dependents, employment and marital status, geographic location, etc., as well as the type and source of income. In addition to the demand for income distribution data from the investigators interested in describing and analysing poverty and changes in income inequality - that is in questions of welfare - a new demand has been created by the recent efforts to analyse the determinants of consumption. In much of this work the distribution of income plays a central role.

Uses of Income Distribution Statistics

9. Statistics of income distribution in the less developed economies are still largely of use in the analysis of poverty and welfare. As programmes for public provision of such facilities as housing, hospitals and other medical care, and supplementary distribution of food are undertaken information on the size and geographic distribution of income supplies a major factor in their allocation. Increasing interest, however, is being shown in them in connexion with many phases of national economic planning in such countries. The studies of capital formation, price control and taxation, to name but a few areas of current interest, are greatly facilitated by the availability of even rough statistics of income distribution by income size and other factors. In their absence such studies contain explicit and implicit assumptions on the distribution of income and wealth. In the economically more developed countries the same holds though in more intensified form. Here such statistics are beginning to be regarded as an indispensable tool for the analysis of consumer demand, personal savings, tax yields, as well as for
the public provision of social welfare services and benefits. Each of these items is a title or heading which covers a multiplicity of uses served by data on income distribution. The field of consumer demand embraces the analysis of markets for specific products, changes in the level of effective demand from changes in employment, monetary and fiscal policies, personal savings, rationing, price control, etc. The growing use of the aggregative approach to economic problems is in considerable measure dependent on these data.

10. Up to the present time the development of national income statistics has generally been in terms of two types of income distribution: by functional shares and by industrial origin. Except for a few countries little attention has been paid to the development of estimates of the distribution of personal income by income-size classes. This has been mainly due to the lack of basic statistics for estimating the size distribution of total personal income, and the fact that income-size distributions have not offered a generally useful approach to the estimation of the totals. The recent interest directed to the development of national income statistics in constant prices will likely direct attention to measures of size distributions of personal income. Statistics of national income or income payments to individuals in constant prices are frequently interpreted as measuring changes in a country's economic welfare. An implicit assumption of this proposition is that the distribution of income as to size classes, geographic area and other socio-economic characteristics of the income receivers has remained unchanged over the period. In other words the assumption of unchanged welfare based on constancy of real income should be modified in the light of shifts in the distribution of income.

11. One of the main difficulties of using income distributions by size to analyse changes in welfare or the relationship between income and consumption and saving is the fact that the time-span of the income in terms of which the size distribution is made is relatively short. That is to say, an income distribution based on the income of a single year reflects to a considerable degree the particular circumstances of that year with respect to the income
recipients. Thus it reflects both the extraordinarily high and low incomes which are of an exceptional character for the individuals or families concerned. Both these high and low incomes may be of a single-time character bearing little relation to the "normal" income of the individuals concerned. Some of these may even be attributable to considerations of tax effects, though generally this would be expected to work in the opposite direction. Some work has been done in developing averages of distributions for a number of years. This is however a partial correction and only takes into account circumstances peculiar to particular years, it does not take account of individual variations. For such work it is necessary to correct the incomes in each individual year by some measure of changes in purchasing power since otherwise the effective purchasing power of equal portions of each year's income is equated. Another difficulty in the use of income distributions in the appraisal of changes in welfare lies in the need to correct incomes by the family responsibilities of the income earner or to relate the number and composition of the family to the income. Various systems of weighting adults and children to provide "equivalents" have been used. Caloric requirements, age, sex, etc., have been used but alone these do not take into account such factors as the economies of housing and the common use of household equipment. Sweden amongst other countries has published income-size data in terms of male-adult equivalents. Two positions seem to have emerged from writers in this field, namely, any correction is preferable to none at all, and since there is no fully adequate method of correcting the best that can be done is to prepare separate distributions for all the relevant situations of which the investigator is aware. This would require separate distributions by the number, age and marital status of the family members and geographic location of the family to take perhaps the most important factors in affecting income needs. This alternative perhaps constitutes an admission that while one may order the importance of many of these factors it is not possible to assign values to them that represent amounts of welfare.
Sources of Income Distribution Data by Size

12. Virtually the only sources of data on the distribution of income by size classes are statistics of personal income taxes, population censuses and sample surveys. Limited data on distributions by size have been derived from statistics of weekly earnings, wage taxes, social insurance contributions, etc. In a few countries more than one of these sources have been combined, as for example in the Netherlands and Sweden where the population census data have been used as a frame for drawing a sample of the personal income tax statistics so as to permit the derivation of estimates of family income by size groups. In both Belgium and Germany separate distributions based on personal income taxes and wage taxes have been combined to provide a size distribution with a broad coverage. Several countries which have obtained income size data from population censuses have based the data on a sample of the population as in the United States or a sample of the returns as in the Scandinavian countries. The following pages contain a review of country practices in obtaining statistics on the distribution of incomes by size of income and other characteristics of the income unit.

II. INCOME TAXES AS A SOURCE OF STATISTICS ON THE DISTRIBUTION OF INCOMES

13. Personal income taxes, despite certain shortcomings, are an important source of information on the size and socio-economic characteristics of income receivers. The growth of the money economy and the increasing reliance on direct taxes seem likely to lead to an increase in this type of information and to augment its usefulness. In some countries tax statistics are the only available information on the distribution of income by size while in several others, including Canada, Denmark and the United States, they have been effectively used together with data from sample surveys or censuses to develop size distributions for the whole range of incomes.

14. The main drawbacks of tax data as a source of information on income size distribution is the omission of low income groups and the fact that the definitions of income and income recipient unit are determined by the tax
laws rather than by the needs of the user of the statistics. To a considerable extent the problem of income definition can be overcome by the preparation of separate distributions for the several types of incomes and deductions shown on the tax return. Separate distributions for such items as transfers, income from personal exertion, property income, personal exemptions, etc., would permit the user to assemble the data in a more satisfactory fashion for the purpose at hand.

15. The personal income tax statistics of the United States provide separate distributions by income-size class of the number of returns and amount of income for eleven items of income. The same information is provided for six types of deductions for those returns on which the individual deductions are itemized.

16. The income unit in statistics of personal income taxes is the individual tax return. Except where the filing of joint returns for husband and wives is permitted or required the distribution by size and other characteristics is compiled in terms of physical individuals. No case was found where the official statistics had been compiled in terms of family or household income units by means of collating the tax returns for families having more than one income recipient. In the Netherlands and Sweden a sample of the tax returns have been collated for all members of a family filing returns by obtaining the individual family membership data from the population census for a random sample of the population.

17. In the United States income-size distributions in terms of family income units have been prepared by combining income tax statistics with sample survey data. The resulting distribution of incomes by family units was adjusted to the totals of the national income data. The problems of (a) separating the incomes of husbands and wives reporting jointly on one return, and (b) combining the individual income distributions into family income units were solved by the use of special tabulations not ordinarily available of both the tax and survey data.

18. The use of sample survey data on income size in addition to that derived from income tax returns permits the extension of the distribution to the very
low income levels, not usually covered by the tax returns as well as data for
the approximation of the total number of earners in the family. Tax returns
usually omit some of the latter whose incomes fall below the tax reporting
level.

19. The problem of incomplete coverage due to the omission of low income
receivers from distributions based on tax returns has been partially overcome
in several countries by the lowering of the personal exemptions and the minimum
incomes required to be reported. These factors coupled with the war and post-war
inflation have considerably expanded the proportion of income receivers filing
tax returns. Another development which may lead to an increase in the coverage
of income tax data is the coupling of social security taxes with taxes on wages
or total incomes. As the social security taxes frequently have a lower minimum
exemption limit than income taxes this development may become an important
factor in expanding the coverage of data on income distributions based on
personal income taxes.

20. Table 1 indicates the coverage of the personal income tax statistics by
relating the total income of the broadest size distribution available to the
estimate of the country's national income for the same year. Since statistics
on the total labour force are not available for all of the countries listed
and since some persons not actively engaged or counted as part of the labour
force receive pensions of income from investments the comparison of the number
of returns or individual taxpayers has been made with the total population. This
table also indicates that for countries with developed income tax systems the
coverage of the income statistics in terms of income and especially total
population is quite high being generally between two thirds and three quarters
of the national income.

21. In countries with less developed economies income tax statistics in most
cases cover only the upper end of the income distribution. Examples are
Ceylon and Cyprus for which personal income tax statistics only cover
approximately 12 and 13 per cent of the national income and 2 to 3 and 6 to 7 per
cent of the population respectively.
<table>
<thead>
<tr>
<th>Country</th>
<th>Income Year</th>
<th>Number of Tax Returns</th>
<th>Number of Dependents</th>
<th>Total Tax Return Population</th>
<th>Total Amount of Income Reported</th>
<th>Tax Return Population as Percentage of Total Population</th>
<th>National Income</th>
<th>Income Reported as Percentage of National Income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Taxable</td>
<td>Total</td>
<td>Taxable</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>1951-52</td>
<td>3,420</td>
<td>3,420</td>
<td>3,293</td>
<td>6,713</td>
<td>8,431</td>
<td>£ 2,157</td>
<td>£ 3,197</td>
</tr>
<tr>
<td>Belgium</td>
<td>1949</td>
<td>2,325</td>
<td>4,268</td>
<td>4,786</td>
<td>8,614</td>
<td>13,447</td>
<td>Fr 121,126</td>
<td>Fr 241,200</td>
</tr>
<tr>
<td>Canada</td>
<td>1949</td>
<td>2,232</td>
<td>3,755</td>
<td>2,554</td>
<td>4,786</td>
<td>13,447</td>
<td>$ 8,430/</td>
<td>$ 13,194</td>
</tr>
<tr>
<td>Denmark</td>
<td>1952</td>
<td>n.a.</td>
<td>2,111</td>
<td>n.a.</td>
<td>4,504</td>
<td>Kr 13,232</td>
<td>Kr 21,556</td>
<td>n.a.</td>
</tr>
<tr>
<td>Finland</td>
<td>1952</td>
<td>947</td>
<td>1,864</td>
<td>1,765</td>
<td>3,617</td>
<td>4,122</td>
<td>Mk 460,500/</td>
<td>Mk 610,200</td>
</tr>
<tr>
<td>Germany</td>
<td>1950</td>
<td>13,200</td>
<td>13,200</td>
<td>19,346</td>
<td>39,400</td>
<td>47,519</td>
<td>DM 52,000/</td>
<td>DM 71,500</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1950</td>
<td>n.a.</td>
<td>3,994</td>
<td>5,853</td>
<td>9,847</td>
<td>10,114</td>
<td>Fl 12,102</td>
<td>Fl 15,650</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1951-52</td>
<td>520</td>
<td>585</td>
<td>572</td>
<td>1,157</td>
<td>1,947</td>
<td>£ 455/</td>
<td>£ 622</td>
</tr>
<tr>
<td>Norway</td>
<td>1950-51</td>
<td>987</td>
<td>987</td>
<td>1,106</td>
<td>2,093</td>
<td>3,264</td>
<td>Kr 6,514</td>
<td>Kr 12,879</td>
</tr>
<tr>
<td>Sweden</td>
<td>1952</td>
<td>3,735</td>
<td>n.a.</td>
<td>7,125</td>
<td>n.a.</td>
<td>n.a.</td>
<td>Kr 26,055</td>
<td>Kr 36,340b</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1952-53</td>
<td>n.a.</td>
<td>19,800</td>
<td>25,796</td>
<td>45,596</td>
<td>50,857</td>
<td>£ 10,150</td>
<td>£ 14,628</td>
</tr>
<tr>
<td>United States</td>
<td>1950</td>
<td>38,187</td>
<td>53,060</td>
<td>80,679</td>
<td>133,739</td>
<td>150,697</td>
<td>$ 179,148/</td>
<td>$ 240,000</td>
</tr>
</tbody>
</table>

Note: These data have been assembled from the official publications of the respective countries. The number of children and dependents as well as the total tax returns population in most cases represent estimates based on a limited amount of official data.

a/ Based on dependency data for taxable returns only which indicates 1.14 dependent per taxpayer. If this ratio is applied to all individuals filing returns the tax population is 8.1 million or 60 per cent of the total population in 1949. In 1952 the total number of personal income tax returns represented over 80 per cent of the civilian labour force.

b/ Net domestic product at factor cost.

c/ Includes non-taxable as well as taxable income.
Income Definitions used in Tax Statistics

22. It has not been found practicable to attempt a detailed review of the definitions of income which are used in the size distributions of tax data. In general such definitions are to be found in the tax laws, their interpretations by the courts of a country and in the complex of economic and social institutions prevailing in a particular country. Aside from these factors is the problem of language which is often rooted in a country's commercial practices. Thus the same terms may have different meanings in different countries. The following notes are accordingly of a general nature.

23. Income tax regulations basically deal with two types of income definitions. First, they specify the types of income which must be reported on the return, frequently specifying the incomes or receipts which are to be excluded. Various terms are applied to this concept such as gross adjusted income, true income, actual income, reported income, etc. The second major definition concerns the income on which the tax is to be paid. This is often referred to as assessed, taxable or net income. Often this is defined by noting the types of deductions from the gross concept which are legally permissible to make before arriving at the net taxable income. This may be stated before or after deduction of the personal and dependency exemptions. In general it is the first of these concepts, which will be referred to here as reported income, which is tabulated in the size distribution statistics. Some countries also publish statistics of the size distribution of reported incomes after income taxes.

24. Most statistics of the size distribution of reported income distinguish between wages and salaries, and other income. Frequently the latter is divided between income from capital such as dividends, interest and rents and income from self-employment which is generally a mixture of labour and property income. In general reported income excludes the expenses incurred in acquiring the income. Thus, for example rents are stated net of maintenance and depreciation. Earnings from employment are generally stated gross of the employee's contribution to social security schemes but net of the employer's contribution. Earnings from self employment which includes proprietorships, partnerships and the liberal professions are usually defined in terms of the accounting concept of
net income, customarily used in the country. Differences in treatment among the various countries lie primarily with such items as inventory valuation, capital gains and losses, the carrying forward of past losses, and depreciation. Similarly, the earnings of the taxpayer's capital are generally included on a net basis, as for instance in the case of rents and royalties. Practice differs on the treatment of such items as interest on government bonds. In Germany and the Netherlands it is specifically included whereas Finland excludes interest on state bonds and on savings deposits. Imputed net rent on owner-occupied houses is specifically included in the Netherlands and excluded in Australia.

25. Certain types of income are exempt from taxation and as such are usually omitted from the definition of reported income used. Most of the countries studied exempt military pensions and family allowances. Australia, New Zealand and Norway specifically exclude old age pensions, and Belgium exempts grants to the disabled. The treatment of private pensions and annuities is rather complicated. The most general principle seemed to be that the private annuity and pension receipts are treated as taxable income only if the contributions are permitted as deductions. Otherwise they are generally treated as a return of capital.

26. Income in kind, aside from imputed rent, is specifically included in Denmark, Germany, Netherlands and Norway, though in the publications of several of these countries it is noted as being usually a fairly nominal figure. The treatment of capital gains and losses (current) differs sharply. Australia, the Netherlands and New Zealand specifically exclude such items while for the most part they are included in Germany and the United States.

27. Personal income can be defined as a measure of the individual's contribution to current output, or it can be defined as a measure of his current power to consume. Since consumption is usually regarded as a joint affair as of a family or household and since the income unit of tax statistics is the individual or husband and wife, tax statistics are regarded as measuring the individual's contribution to current output. This is essentially the net national product concept. The main differences between this concept of income and that found in
most taxation statistics are in connexion with various transfer payments which are frequently included in reported income. Thus, pensions, relief payments and gifts which are frequently included in reported income should be omitted in measuring an individual's contribution to current output. Retained corporate earnings are part of a country's total net income or product though they are very generally omitted from reported income. The exclusion of direct taxes from tax statistics as in Denmark results in a closer measure of the purchasing power of consumers than of net output or contribution. To the extent that income in kind is included the taxation statistics more closely approximated both the concept of productive contribution and purchasing power of consumers. The deduction of previous losses and employer contributions to social security programmes from reported income tends to shift the definition of income used in the tax statistics away from income as a measure of the productive contribution and toward that of purchasing power of consumers.

Income Concepts Used in Defining Size Classes

28. Most countries preparing income-size distributions from tax data define the size classes in terms of the broadest income concept used in the distribution. Thus, for example, the Canadian personal data is classified according to Total Income Declared; that of the United States by Adjusted Gross Income; that of the United Kingdom by Range of Total Income and that of Denmark by Income Class of Taxed Income. In the tax statistics of each of these countries the concept adopted in defining the amount of income distributed agrees with the definition of income in which the class intervals are stated. Several countries including the United Kingdom and New Zealand provide distributions by income-size classes of Net Income which is reported income less the income tax. In the Australian statistics incomes are distributed by size of the Actual Income whereas the amounts of income distributed refer to taxable income only which excludes exempt income, deductions and personal and dependency exemptions. Since the amounts of the deductions and personal and dependency exemptions are similarly distributed it is possible by addition to obtain a distribution of the actual income less certain exempt income such as pensions and social security benefits.
TABLE 2. COUNTRY TREATMENT OF SOME FACTORS IN THE INCOME DEFINITION USED IN INCOME-SIZE DISTRIBUTIONS PREPARED FROM TAX STATISTICS

<table>
<thead>
<tr>
<th>Income in Kind</th>
<th>Australia</th>
<th>Belgium</th>
<th>Denmark</th>
<th>Germany</th>
<th>Netherlands</th>
<th>New Zealand</th>
<th>Norway</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income in Kind</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>E</td>
</tr>
<tr>
<td>Imputed Rent from Owner-Occupied Dwellings</td>
<td>E</td>
<td>n.a.</td>
<td>I</td>
<td>n.a.</td>
<td>I</td>
<td>E</td>
<td>I</td>
<td>E</td>
</tr>
<tr>
<td>Capital Gains and Losses (Current)</td>
<td>E</td>
<td>n.a.</td>
<td>I</td>
<td>E</td>
<td>I</td>
<td>1</td>
<td>I</td>
<td>E</td>
</tr>
<tr>
<td>Military Pensions, etc.</td>
<td>E</td>
<td>E</td>
<td>2</td>
<td>E</td>
<td>I</td>
<td>E</td>
<td>n.a.</td>
<td>E</td>
</tr>
<tr>
<td>Old-Age Benefits and Relief</td>
<td>E</td>
<td>E</td>
<td>I</td>
<td>E</td>
<td>1</td>
<td>4</td>
<td>E</td>
<td>5</td>
</tr>
</tbody>
</table>

| Losses of Previous Years                | D         | D       | ND      | ND      | D           | D           | ND     | D             |
| Expenses in Acquiring Income            | D         | D       | D       | D       | ND          | D           | D      | D             |
| Life Insurance Premiums                 | D         | D       | ND      | D       | D           | D           | ND     | D             |
| Employee Contributions to Social Security | n.a.     | D       | ND      | ND      | ND          | D           | ND     | D             |

1/ Excluded if from securities.
2/ Item non-existent.
3/ Disability pensions only.
4/ Private pensions and annuities included.
5/ Public benefits.
6/ Up to £150 per year.
29. The New Zealand statistics are distributed according to classes of returnable, assessable and taxable income. Briefly, returnable income is defined as total income less the expenses of acquiring such income, war pensions and some types of social society benefits; assessable income equals returnable income less income on which the tax has been collected at the source such as dividends and proprietary income and taxable income is assessable income less personal and dependency deductions. A considerable flexibility is provided by this method since for each definition of income intervals the amount of income matching each definition is distributed.

**Income Unit in Tax Statistics**

30. The individual tax return is the primary statistical unit in distributions based on tax data. Except for those countries in which joint-reporting of married couples is permitted or required by the tax regulations, the income unit is the physical individual. In general joint returns for married couples are tabulated as a single income unit, whether only one or both are income earners. The effect of this is to obscure such statistics as measures of the distribution of individual incomes or distributions of productive contributions of individuals. A number of countries including Canada, Netherlands and the United States, which permit or require joint-reporting of the income of married couples, compile separate distributions for taxpayers by marital status. Even where joint-reporting is not permitted it is not unlikely that some distortion in the income distribution occurs from the practice of transferring earning assets between husband and wife so as to minimize the total tax burden.

31. No instance was found in which the tax returns had been tabulated according to families or households by grouping the returns of all taxpayers in an income unit except on a sample basis in the Netherlands and Sweden. In addition to the problem of defining membership in the family unit which may change over the income period, such a procedure would result in omitting the income of family members with incomes below the minimum reporting level. As an alternative the preparation of separate distributions for joint returns, separate returns of husbands and wives and single persons cross-classified by the age or number of dependents claimed for each return would seem to offer the necessary data for
the rough estimation of family income distributions. Except for the cross-classification for age of dependents the United States returns are published in this fashion. Where the dependency exemptions differ with respect to the age and relationship of the dependents to the taxpayer the system of cross-classifying the number of returns in each income class by the number of dependents in each category as is done in Australia is a most useful procedure.

Intervals Used in Income-Size Distributions

32. In general income-size distributions based on personal income tax statistics are compiled in terms of more income intervals than distributions derived from other sources. This is especially true of the upper end of the distribution which is generally much compressed in distributions based on sample surveys and censuses. Accordingly tax data has been of value chiefly as a measure of the distribution of the middle and upper incomes. Until recently the exemption levels in most countries were so high relative to a substantial proportion of the incomes that the distributions omitted a considerable fraction of all income recipients. Today, however, tax statistics in many countries cover a substantial proportion of the population. They cover an even larger proportion of the total income as is indicated in Table 3. The number and size of the class intervals into which the tax returns are classified is of considerable importance in the usefulness of these data. While it is customary to use narrower brackets for the lower than for the rest of the income scale the use of income class intervals which include a substantial fraction of the income units considerably reduces the analytic value of such data. This becomes especially true when the crude data are adjusted to a per capita or adult male equivalent basis. Thus, for example, the personal income statistics of the United Kingdom include 9.7 million or nearly half of all taxpayers in the income bracket £250-500. Of these taxpayers 38 per cent were single with no dependents and 50 per cent were married with an average of 2.1 dependents per taxpayer. If each group were more or less evenly distributed over the range of the income bracket a much different picture of economic well-being would emerge than if the single taxpayers with no dependents were concentrated at the lower end of the income interval.
### Table 3. Comparison of Income Intervals Used in Income-Size Distributions Prepared from Income Tax Returns

<table>
<thead>
<tr>
<th>Country</th>
<th>Income Year</th>
<th>Number of Size Classes&lt;sup&gt;a/&lt;/sup&gt;</th>
<th>Largest Percentage of Income Units in One Size Class</th>
<th>Largest Percentage of Income Included in One Income-Size Class</th>
<th>Number of Income-Size Classes with Over 10 Per cent of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1951-52</td>
<td>24</td>
<td>8.6</td>
<td>7.7</td>
<td>-</td>
</tr>
<tr>
<td>Canada</td>
<td>1949</td>
<td>44</td>
<td>10.9</td>
<td>12.2</td>
<td>1</td>
</tr>
<tr>
<td>Denmark</td>
<td>1952-53</td>
<td>30&lt;sup&gt;b/&lt;/sup&gt;</td>
<td>11.1</td>
<td>26.3</td>
<td>1</td>
</tr>
<tr>
<td>Finland</td>
<td>1952</td>
<td>15</td>
<td>24.0</td>
<td>20.8</td>
<td>4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1950</td>
<td>41</td>
<td>13.8</td>
<td>12.2</td>
<td>3</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1951-52</td>
<td>23</td>
<td>19.3</td>
<td>13.7</td>
<td>5</td>
</tr>
<tr>
<td>Norway</td>
<td>1952-53</td>
<td>42</td>
<td>9.7</td>
<td>9.1</td>
<td>-</td>
</tr>
<tr>
<td>Sweden</td>
<td>1952</td>
<td>20</td>
<td>15.6</td>
<td>20.0</td>
<td>1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1952-53</td>
<td>11</td>
<td>49.1</td>
<td>35.8</td>
<td>3</td>
</tr>
<tr>
<td>United States</td>
<td>1950</td>
<td>49</td>
<td>10.2</td>
<td>9.7</td>
<td>1</td>
</tr>
</tbody>
</table>

<sup>a/</sup> These figures are taken from the distributions having the largest number of income-size classes. Most of the countries included in this table publish income-size distributions in terms of fewer size classes for some of the cross-classifications by socio-economic characteristics.

<sup>b/</sup> The distribution of the amount of income is limited to 13 size classes.
33. Table 3 depicts this situation in a rough fashion. The number of size
classes and the proportion of taxpayers and income in the largest size class
does not, of course, fully depict the situation but it should call attention
to the need for an examination of the size intervals in use.
34. In a number of countries the published distributions have been confined
to returns on which taxes were liable. In most cases this results in the
omission of a substantial number of returns with income above the minimum
requirement for filing a return but on which no tax was payable owing to
dependency or other exemptions. The effect of this is to largely destroy
the usefulness of the information given for the lower income brackets by the
omission of non-taxed returns and to obscure the cut-off point or that income
level above which the tax statistics are relatively complete. In Norway, for
example, the lowest income bracket shown for the distribution of tax returns
begins at 2,000 Kr. Since 40 per cent of all taxpayers had declared incomes
of less than 5,000 Kr., the total personal exemption of 5,500 Kr. for a taxpayer
with four dependents would result in his omission unless his income exceeded
this amount. The net result is to omit a considerable number of income receivers
with small and medium incomes if they have dependents. Aside from a minimum
filing requirement there does not appear to be a satisfactory solution to the
problem of an unambiguous cut-off point for low incomes. Some countries have
such a requirement. To be effective it must be coupled with the inclusion
of non-taxable as well as taxable returns in the size distribution.
35. The separate publication of data on returns with no taxable income as
is presently done in Canada, New Zealand and the United States considerably
enhances the general usefulness of tax data as a measure of the size distribution
of incomes at the lower end of the income scale. This is especially true when
the dependency exemptions are relatively large and especially where the marginal
allowance increases with the increase in the number of dependents as in Norway.

Income Tax Statistics Distributed by Socio-Economic Characteristics

36. In addition to preparing frequency distributions of the number of tax
returns and the amount of income by income-size classes a number of countries
prepare distributions by various socio-economic characteristics of the income
unit. In many instances income-size distributions are cross-classified by a number of socio-economic characteristics. A brief survey of these data indicates that a rather wide range of characteristics are employed in the classification of the tax returns. In part this variation arises from differences in the tax regulations, as for instance in the classification by type of income, as well as in the extent to which the tax return provides for reporting the social and economic characteristics of the taxpayer.

37. Much of this information would appear to have been included in response to the needs of the tax officials for checking the returns and in deriving useful statistics for estimating future tax yields. There is some evidence in the considerable range of data provided by a few countries that the needs of the economist for statistics on income distribution have been taken into account. This is particularly true of the personal income tax statistics issued by the Scandinavian countries and the United States.

38. Table 4 shows, for a number of countries with developed personal income tax systems, the country practices in preparing cross-tabulations of socio-economic characteristics and income-size classes. Owing to the wide variations in the degree of detail and organization of the statistics, this table provides only a very rough indication of the material available in each of the several countries included.

39. Some tabulations are in terms of the number of income receivers or taxpayers only, others give statistics of the number and amount of the declared or taxable income in each cell. In some instances, the pertinent cross-tabulation is not shown directly but can readily be derived from the data published. In addition to the items noted in the table a number of countries provide data on the distribution of taxpayers and income by a number of characteristics without relating this information to an income-size distribution. The fact, however, that most characteristics are cross-classified by income size attests to the interest and importance attached to it. Frequently fewer size classes are used when cross-classification is employed than in the basic income-size distribution since otherwise the cell populations would become too small. When the statistics are derived from a sample of the tax returns the variance may become too large unless broad income classes are used.
TABLE 4. COUNTRY PRACTICES IN CLASSIFYING INCOME-SIZE DISTRIBUTIONS (DERIVED FROM TAX RETURNS) BY SOCIO-ECONOMIC CHARACTERISTICS OF THE TAXPAYERS

(x designates the inclusion of an income-size distribution classified by the designated characteristics in the official publication of tax statistics)

<table>
<thead>
<tr>
<th>Marital and Dependency Status</th>
<th>Australia</th>
<th>Belgium</th>
<th>Canada</th>
<th>Denmark</th>
<th>Finland</th>
<th>Netherlands</th>
<th>New Zealand</th>
<th>Norway</th>
<th>Sweden</th>
<th>United Kingdom</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Persons</td>
<td>x</td>
<td></td>
<td>x x</td>
<td>x x</td>
<td>x x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married Couples (joint returns)</td>
<td>x</td>
<td></td>
<td></td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Married Couples (separate returns)</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Children and Other Dependants</td>
<td>x x</td>
<td></td>
<td></td>
<td>x x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment Status a/</td>
<td>x</td>
<td>x x</td>
<td></td>
<td></td>
<td>x x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational Status a/</td>
<td>x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial Attachment</td>
<td>x</td>
<td>x x</td>
<td>x x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geographical Location</td>
<td>x x</td>
<td>x x</td>
<td>x x</td>
<td>x x</td>
<td>x x</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Age</td>
<td></td>
<td></td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sex</td>
<td>x</td>
<td>x x</td>
<td>x x</td>
<td></td>
<td>x x</td>
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<td></td>
<td></td>
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<tr>
<td>Type of Income</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages and Salaries</td>
<td>x x</td>
<td></td>
<td></td>
<td>x x</td>
<td>x x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Income</td>
<td>x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Earned Income</td>
<td>x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x b/</td>
<td></td>
</tr>
<tr>
<td>Property Income</td>
<td>x x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x b/</td>
<td></td>
</tr>
<tr>
<td>Personal Exemptions</td>
<td>x x</td>
<td></td>
<td>x x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x x</td>
<td></td>
</tr>
</tbody>
</table>

a/ In several instances the employment and occupational status of the taxpayer are combined in one table. Employment status is used here to designate, in general, the following classifications: wage and salaried employees, self-employed and those not actively engaged. Frequently the self-employed are divided among farmers, members of liberal professions and others.

b/ Available for surtax incomes only.
40. The most common socio-economic characteristics used in classifying tax returns data are: age, sex, employment status, industrial source of income, geographical location and dependency status of the income receiver. Countries levying taxes on wealth, such as Finland, Norway and Sweden, cross-classify income receivers by size of income and property. Sweden appears to be unique in the publication of tables for married couples in which both husband and wife are income earners. These show the number of such couples according to the income-size class of each as well as the industry or type of employment.

41. Most countries compiling personal income tax returns classify income receivers by employment status, occupation or industrial attachment. So varied are the practices in this respect that it is not possible to generalize. Most countries have adopted mixed classifications composed of two or all of these characteristics. In the statistics of some countries only a few broad groups are distinguished while others provide highly detailed classifications. The statistics of New Zealand, for example, classify the self-employed into most of the two and three-digit industries of the ISIC, showing the number of assessable incomes by fourteen income-size classes. Individuals filing tax returns whose principal source of income was from wages or salaries are classified by approximately 170 occupations. Persons not actively engaged in the labour force are classified according to their principal source of income, such as pensions, interest, rents, etc.

42. Classification by employment status generally distinguishes self-employed, wage and salary workers and those deriving their income from farming. Frequently those engaged in the liberal professions are distinguished from the other self-employed. The Canadian statistics distinguish among (a) those engaged in primary production, (b) liberal professions, (c) all employees, (d) salesmen and (e) business proprietors. Employees are separated as to agriculture, business, institutions, government and the armed forces. The liberal professions are subdivided into eight categories, and some of the others are also divided into sub-groups. Taxpayers whose main source of income is from investments or pensions are shown separately. The tax statistics of Denmark show separate data for about 40 socio-occupational groups amongst which are (a) farmers by three farm-size groups, (b) directors, (c) factory owners, (d) master craftsmen,
(e) technical employees (f) shop personnel, (g) wage earners, (h) public servants, (i) apprentices and students, (j) persons without employment, etc.

In the tax statistics of Sweden the employment status-occupational classification is limited to employers, employees and persons not in the labour force for each of nine industrial groups. It is of interest to note that while the statistics of the Scandinavian countries include a good deal of detail on occupational-industrial status these classifications are entirely omitted from the statistics of the United Kingdom and the United States. Tax statistics of the Netherlands are distributed by major industrial attachment while those for Austria and West Germany distinguish taxpayers among agriculture, self-employed, employees and those persons deriving the major portion of their income from interest, dividends and rents.

43. A major limitation of income statistics classified by occupational-industrial status lies in the cases where individuals have more than one occupation or receive substantial proportions of their income from different sources. Thus if a taxpayer is employed and receives a major portion of his income from property he will likely be classed as a rentier if the major source of income is the criterion used. Persons who moved between occupations or industries during the year will likely be classified according to the activity in which the worker worked longest rather than the most recent.

44. To fully account for the tax population it is necessary to include those taxpayers not actively engaged in the labour force as several countries are now doing. The division of this group between those for whom pensions, as opposed to property income, constitute the chief source of income is likely useful. Further distinctions, as amongst different types of property income, would seem to offer little additional usefulness.

45. Many countries compiling income distributions from tax statistics prepare separate distributions by type of income. The most common distinction is between income from labour and income from property. Where the distinction is limited to these groups the allocation of the incomes of the self-employed is necessarily arbitrary. In the Canadian statistics the distinction is made between earned income and investment income. The latter is composed of interest and dividends
and rents while earned income includes all other types of income including that of proprietors. A similar practice is followed in the Australian statistics where the distinction is made in terms of income from personal exertion and income from property. The latter is composed of dividends, interest and rents. Income from personal exertion is divided between salaries and wages and other income which is mainly composed of earnings of the self-employed including professions. In each of these countries the amount of each type of income is shown distributed according to the size class of actual income. No attempt is made to allocate the number of returns according to the chief source of income. The New Zealand statistics provide complete size distribution including the number of returns, and the amounts of income for persons whose chief source of income is (a) salaries and wages, (b) investments and the like and (c) farming, private trading, professional, etc. In addition a distinction is made between earned and unearned income, in which all income from personal exertion including pensions and annuities is included in the former. Thus unearned income is mainly composed of interest, rents and dividends. In the United States statistics no attempt is made to distribute the number of individual income earners according to the chief type of income. Rather the number of returns reporting each type of income and the amount of each type are distributed according to the size class of the total income. In addition distributions are prepared for each type of income cross-classified by size of total income and of the particular type. The Belgian statistics distinguish between agricultural and industrial profits, earnings of professions, receipts of pensioners, directors and managers, wage and salary receivers and those who receive both wages and profits.

46. Nearly all countries publish some type of information on the dependency status of the income recipient by income-size class. This often takes the form of frequency distributions of returns according to the number of dependents claimed for tax exemptions. In the statistics of several countries the amount of dependency deductions is distributed by income-size class. It would appear that in compiling these data some countries have measured dependency status in terms of the number of dependency credits rather than number and status of dependents. This makes the analysis of the total number and status of dependents somewhat inconclusive.
47. The information on dependency status appears to have two main uses. First, the use of income-size distributions as indicators of the relative well-being of the population depends in part on the distribution of family size and composition relative to income. While the assumptions that each family has but one income earner and that the dependents claimed for the income earner represent his economic responsibilities would appear unrealistic in most countries, they may serve as an approximation of the breadwinner's responsibility and hence income need where other data on a family basis are lacking. The relatively common practice of the joint-reporting of the income of husband and wife lends validity to this assumption.

48. The publication of income-size distributions of taxpayers according to the number and major age groups of dependents claimed permits the derivation of consumption units. That is given the number and age group of dependents values can be assigned to each according to personal predilection and data available regarding relative income needs. Secondly by permitting the total population of taxpayers and their dependents to be calculated the coverage of the total distribution can be determined. In this respect the United States income tax statistics provide quite complete information. For each of the main types of returns such as joint returns of husbands and wives, individual returns of husbands and wives and returns of single individuals an income-size distribution is provided showing for each income class the number of returns by number of individual exemptions. While returns claiming six or more exemptions are grouped into one category the number of exemptions in this group is also shown. The Canadian tax statistics provide size distributions separately for marriage status claimed for tax purposes and a partial indication of the number of dependents. The taxation statistics of Australia provide distribution of all dependents according to the numerical dependency status.

49. The statistics of most countries include a geographical classification, normally according to the statutory residence of the taxpayer. Commonly used areas are political subdivisions or tax districts. In general the statistics of the Scandinavian countries are distributed on a rural-urban basis as well as individually for the larger cities. In Australia, Belgium, Canada and the
United States the state or province is the basic geographical unit. Separate
data are published for 58 cities and towns in Canada and 94 in Denmark. Except
for the Netherlands no geographic classification was found based primarily
on considerations of regional economic units which do not coincide with
political boundaries.

III. POPULATION CENSUSES AS A SOURCE OF INCOME DATA

50. Population censuses are being used in a number of countries to obtain
data on income or earnings of individuals or families. The inclusion of
questions on income has been a fairly recent development in the census work
of most countries undertaking it. Between 1948 and 1953, questions on income
or earnings were included in the population censuses of twelve countries.
In Colombia, the Dominican Republic, Mexico, Panama, Venezuela, Ceylon, Pakistan
and the Philippines it represented a first attempt to collect such data. Since
the results of this experiment are not yet available for most of these countries
it is not possible to appraise this initial experiment. For the most part
the results indicated below have been drawn from Canada, New Zealand and the
United States which have well developed censuses and have several times included
income questions.

51. Because of their universal coverage population censuses can be used as a
frame for sampling. In the 1950 Population Census of the United States the
income questions were limited to a 20 per cent sample. The Netherlands and
Sweden have used population censuses as a means of drawing a sample of the
income tax returns so as to obtain data on family incomes.

52. The main advantage of the census of population as a vehicle for obtaining
data on income is its universal coverage so that all and especially the low-
income recipients are included. Another advantage is that it enables data on
income-size distributions to be cross-classified by various demographic,
social and economic characteristics of the population. In addition, it
provides a ready means of obtaining income or earnings data for units other
than the individual such as families or households. By virtue of its coverage
it can be made to yield income-size distributions by very small geographical
areas where small size sampling is not efficient.
53. The drawbacks of population censuses as a means of obtaining data on income lie largely in the response errors and in the relative infrequency with which such censuses are taken. The response errors arise in part because people do not want to divulge their income to the enumerators as well as in the fact that it is frequently necessary to obtain information on incomes of members of the family not present when the census enumeration is carried out. Frequently these members are the chief income earners. In these circumstances the ability to apply given definitions of income are often extremely difficult. This is especially true when, owing to the scope of the enumeration task the training and interviewing time of the enumerators are quite limited.

**Definition of Income in Population Censuses**

54. The various definitions of income used may be divided into two main types: (a) labour income which includes wages, salaries, commissions, piece-rate earnings, tips, etc., and (b) total earned income from capital and personal services plus pensions, social security benefits and other regular receipts from past savings or public transfers. In general, single-time receipts such as inheritances and lump-sum insurance payments are excluded. Income from self-employment is included in (b) and generally defined as net receipts after all expenses of acquiring the income have been met. Net losses are also included. The Canadian Population Census of 1951 and that of Panama for 1950 use the former, while the recent censuses of Mexico, New Zealand, South Africa and New Zealand specifically include income in kind which is omitted from the income definition used in the United States.

**Income Unit in Population Censuses**

55. One advantage of the population census is that it permits the collection of income data for such groups as families or households, as well as individuals. Cross-classification of income-size distributions by most socio-economic characteristics however is limited in the case of family incomes to the characteristics of the head of the household. Most distributions of income size and other characteristics in the statistics of the United States are for the incomes of individuals; family incomes are distributed primarily by geographical area.
56. A fairly narrow definition of family is used in the Canadian and South African statistics. In these the family is defined as husband and wife, with or without children, or parent with an unmarried child (children) living in the same housekeeping arrangements. Family membership is thus virtually restricted to persons having a husband-wife or child-parent relationship. The definition used in the United States is broader in that it includes any combination of two or more persons related by blood, marriage or adoption living together. While this has the advantage of simplicity in application it may often result in treating as one family, multiple-income recipients and spending units.

57. Although earlier censuses in Canada used the family as the income unit, the most recent which restricted the definition of income to money earnings from wages and salaries was prepared in terms of individuals only. New Zealand statistics have always been compiled in terms of individual income recipients. Those for South Africa have been collected and published for families. The 1950 population census of Panama, in which the data collected on incomes was limited to wages and salaries was tabulated by income-size class for individual employees only.

**Income-Size Distributions**

58. A basic problem in obtaining income data by personal interview is to avoid antagonizing the respondent so that no difficulty will be experienced in maintaining his co-operation for the other questions as well as to obtain accuracy in the replies to the income query. It has been thought that by presenting the respondent with a set of income brackets for checking, both these problems could be met. Experience on this point appears very mixed. In its last two population censuses the Union of South Africa has used the bracket type of question. Canada which had called for the actual income amount in previous censuses experimented with the bracket question in its latest population census. Indications are that this has not resulted in any substantial improvement in the accuracy of the income data. New Zealand altered the form of the income question in its last census to require the reporting of income to the nearest £10. The 1950 population census of the United States again
included a question on the total amount of income to be reported separately for each individual.

59. Both New Zealand and the United States set upper limits to the size of incomes to be reported at the actual figure, the former at £750 and the latter at $10,000. The number of income brackets used in South Africa was expanded from nine to seventeen in its latest census and the highest level from £400 to £5,000 for family incomes. The highest Canadian bracket is $6,000 and over for individual earnings from personal services. In effect the establishment of maximum amounts of income to be reported is a recognition of the difficulties of obtaining not only accurate income figures but general co-operation of the respondent when sensitive issues are touched. The use of brackets as well as the establishment of maximum reporting amounts limits the data compiled to numbers of individuals or families and prevents the derivation of income totals. South Africa and the United States provide information on median incomes by several characteristics of the population.

Socio-Economic Characteristics of the Income Unit

60. As noted above population censuses provide the possibility of cross-classification of income-size distributions by the various socio-economic characteristics included in the census. In fact only a limited use has been made of this possibility in most countries. Cross-classification by personal characteristics such as age, sex, occupation are limited to income units in terms of physical individuals, though they could be prepared by families on the basis of the characteristics of the head of the family. In general cross-classifications are prepared by size of income and age, sex, marital status, employment status, occupation and industrial attachment. In Canada and the United States income distributions are classified by number of weeks of employment.

Conclusions

61. The fact that very few countries have attempted to collect income data from population censuses is perhaps indicative of the actual or foreseen difficulties. At least one country, Australia, which included income questions in previous censuses, has omitted them from the more recent enumerations of the
population. As far as is known no European country has even tried the experiment. The chief reason for this would seem to be the possibility that the inclusion of a question on income might weaken the co-operation of the respondents and hence the accuracy of the census. It is likely also though that it would substantially increase the total cost since it would require better trained enumerators and lengthen the time for individual enumeration.

IV. INCOME STATISTICS DERIVED FROM SAMPLE SURVEYS

62. In recent years sample surveys have increasingly used as a means for collecting information on various socio-economic characteristics of the population. This has been true both in countries with well-established statistical systems as well as in those countries where the statistical tradition and organization are as yet new or in a rudimentary state. In the latter sample surveys are frequently the most important and often the only source of data on many characteristics of the population. Many such countries are seeking rapid economic development often through some means of direct economic and social planning by public authorities. Much of the demand for data on the population characteristics of these countries arises from these efforts.

63. Generally the information required by under-developed countries is of a rather primary nature. Quantitative data is frequently sought on such questions as, what do people do for a living, what is the structure of the family or household and most importantly, what do they consume? The emphasis on consumption arises from an interest in the analysis of welfare. Information on income is generally of secondary interest and is used primarily as a check on the total reported expenditures. It is also used, often in connexion with other characteristics to allocate consuming units by economic and social status. For this purpose relatively few income classes are generally sufficient to divide the population being studied into the relevant economic groups based on their income. Other socio-economic characteristics are frequently of equal or greater

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interest for distinguishing relevant groups. Among these are the geographical location, employment status and the composition of the family or other income unit.

64. In addition to their use as a source of data on family expenditures sample surveys have been used to collect income statistics in connexion with other information on consumer finances such as savings, changes in liquid assets, and income and expenditure expectations. Such surveys have been undertaken in Ceylon and the United Kingdom in 1952 and have been taken annually in the United States since the war. In addition sample surveys have been used to gather income data unrelated to information on consumption or savings, as for example the sample mail survey taken in Schleswig-Holstein in West Germany in 1949, and the annual survey of the incomes of families and unrelated individuals taken in the United States by the Bureau of the Census.

Income Unit in Sample Surveys

65. Unlike income statistics compiled from tax returns which for the most part represent the income of individual persons, the income unit in most sample surveys is the family or group which carries on consumption in common. This is due to the fact that most sample surveys by which income data are collected are primarily designed to gather data on consumption. Hence most attempts to define the income unit have sought to limit the definition to coincide with the spending unit, that is the group of which the members pool all or part of their income for food, shelter and other common needs. The composition of this group depends in large part on the social and economic organization of the individual society. Where it is common practice for the family group to extend beyond the husband, wife and minor children and to embrace parents and other relations, whether indigent or not, the definition of the spending and income unit have in general been made to reflect this.

66. The problem is to match the incomes with the shared consumption. The main difficulties arise in trying to determine, (a) the extent to which the income receivers pool their income and (b) the individuals who share in this pool. The former is important in determining the total income while the latter is necessary to analyse total consumption. Practically the definitions used
in most surveys are in terms of the degree of relationship, age, and such tests as living in the same or closely related dwelling or eating at a common table. In several surveys, an income receiver must contribute more than half his income to be included in the income unit.

67. In the 1952 survey of British income and savings income units are defined as follows:

(a) Married couples and their children under 18 years of age;
(b) All single persons of 18 or over. However, persons of 18 or over who had incomes of less than £50 a year and were living with relatives were assumed to be dependents of their relations and were treated as forming part of their income unit.

Defined in this fashion the income unit is narrower than what is commonly meant by family. Its choice has been explained as the desire to define "groups of people of such a type that each was governed by a single will in the allocation of its resources". 5/

68. In most countries the "family" is the primary income unit of such sample surveys. Usually it includes everyone who lives in one dwelling and eats at a common table. The main exception is the usual omission of paying boarders or lodgers. In the Canadian survey of 1947-48 the income unit was defined as a "group of persons who meet expenses from a common income, or one person who is financially independent". Operationally this appears to be very close to the income unit as defined in the United States annual census survey which includes all persons related by blood, marriage or adoption who live together and pool their incomes. Unrelated individuals, that is persons not living with relatives, are treated as separate income units and are distinguished in the statistics. Very much the same definition was used in Ceylon which however, like the definition used in Canada, requires a common pooling of at least one half of the earnings of income receivers to have them counted as members of the unit. Related persons plus boarders were included in both El Salvador and Ireland. The former included in addition all persons who sleep in the dwelling.

69. In a number of countries sample surveys have been limited to certain groups in the population. The survey of 1952-53 in Puerto Rico included only wage-earners' families. These were defined in terms of employment and economic status. Thus families having members in certain clerical or salaried positions were excluded as well as families of the self-employed who engaged one full or two part-time workers. Farmers were excluded if owning ten or more acres of land.

70. The working definition of the income unit is usually a compromise between the concept sought and what is practical to measure. Both are largely products of the family and social structure of the population under scrutiny. For this reason it appears unlikely that uniform definitions would provide data in terms of a single concept.

Definition of Income in Sample Surveys

71. The definitions of income used in sample surveys have generally been very broad and normally include all money earnings, income in kind and most types of transfer payments received by the family or spending unit. All money earnings are generally defined to include salaries, wages, income from property and self-employment, stated gross of deductions for taxes and social insurance contributions but net of expenses incurred in acquiring the income. In most surveys, income in kind is included, though it is specifically excluded in the 1952 Canadian Survey, the Sample Census Survey in the United States and, except for food produced by farmers for their own use, from the United Kingdom survey. The Netherlands survey excludes production for own use though other income in kind is included. In the 1952 Survey in Puerto Rico income in kind is limited to the value of food produced for own use; while in the 1952 Irish study income in kind is limited to the imputed value of home-produced food and meals supplied by an employer. The imputed value of owner-occupied dwellings is generally excluded though it is specifically included in the surveys in Brazil, Panama City, Guatemala City and Colombia.

72. The main difference between the treatment of money receipts from other than earnings, such as receipts from pensions, annuities, gifts, and government
included in income if on a regular basis, single-time receipts such as
inheritances, and lump-sum insurance proceeds are specifically excluded from
a number of surveys as in Canada, the Netherlands, Ireland, Panama City and
the sample census survey in the United States. Exceptions are the sample surveys
taken in Norway, Ceylon and Puerto Rico which specifically include single-time
gifts and inheritances. In the Puerto Rico survey single-time gifts and
inheritances are treated as part of total income but not current income. The
family expenditure surveys in Lisbon and Oporto, Portugal, specifically include
as income the proceeds of loans.
73. A number of rather minor differences in the definition of income relate
to differences in the definition of expenditures or consumption used in these
studies. This is especially true of the treatment of income in kind and the
receipts from boarders and lodgers. Thus where the attempt has been made to
value total consumption including housing, the imputed rent for owner-occupied
dwellings has sometimes been included in income. Receipts from boarders and
lodgers are generally included in family income. Several surveys have attempted
to deal with the added expenses of providing board and lodging. In the 1952
Survey of British Incomes and Savings two-thirds of the payments for lodging
are included as family income while receipts from boarders, if not more than
three, are entirely excluded on the ground that it is difficult to estimate
the net earnings in such a case. If there are more than three boarders the
offering of board is treated as a business and only the net receipts included.
In the Federal Reserve Survey of Consumer Finances in the United States
gross receipts from less than four lodgers are included while all receipts from
boarders are included on a net basis.
74. Several of the sample surveys reviewed provided separate tabulations of
income before and after the deduction of personal income and social security
taxes. In the household expenditure surveys in which income is recorded before
the deduction of taxes such taxes are usually included as expenditure items.
In the British sample survey which focused interest on the factors influencing
personal saving, the concept of net income (gross income less direct taxes
on income including national insurance contributions) was used.
75. The main distinction between the concept of income used in the sample surveys for family budget studies and that found in the income tax statistics is that the latter generally excludes most types of income in kind and various public transfers which are part of income available for consumption and as such included in the surveys of household budgets.

Enumeration Methods Used in Sample Surveys

76. In contrast with the usual procedures of income tax reporting, the collection of information on personal and family incomes by means of sample surveys is normally carried out by a personal interview of the head of the household, one or the other spouse or in some cases, of each income recipient in the family or household. Owing to the fact that sample surveys are usually limited to a relatively small number of persons or income units as compared with general censuses of population there is usually a much better opportunity to use only trained interviewers and to allow them sufficient time to carry out the interview. In addition it is generally possible to include a rather large number of questions in order to probe somewhat deeper into the characteristics called for in the survey and to aid in generating responses by a predetermined set of "lead" or reminder questions.

77. Several surveys of family expenditure have made use of account books which are generally left with the income unit during the period covered by the income and expenditure data to be recorded. Among the latter have been surveys of family expenditures in Brazil, Canada, Guatemala, Ireland and the Netherlands. In the Brazilian survey the use of an account book was limited to families in urban areas. In all of the countries mentioned the use of an account book was coupled with one or more personal interviews. In several surveys the forms were either filled out during the interview or left after the interview so that other members of the family not present during the interview could assist in providing the information requested. A number of forms or schedules used called for a great deal of information on a wide range of socio-economic characteristics other than the information on income expenditures. In the Canadian survey of 1952 the basic schedule contained over four hundred questions.
78. In size the samples ranged from about 25,000 households used by the United States Bureau of the Census to 74 families in the 1952-53 Survey of the Central Bureau of Statistics in Norway. The 1952 Canadian Sample Survey covered 5,600 non-farm families, the survey in the Netherlands included about 3,000 non-farm families, the 1952 Survey of British Incomes and Savings included 2,600 income units and that for Ceylon covered 970 households. Nearly all the other surveys reviewed dealt with less than one-thousand family or household units. The coverage cannot be gauged by the absolute numbers but must be related to the population of the universe covered by the survey.

79. About one half of the surveys reviewed obtained income data for a period of one year, the remainder varied from one month in each of four quarters in a sample survey in Northern Rhodesia to the earnings of working-class families in a mining district of Peru for the latest week. A sample survey of the province of Schleswig-Holstein in West Germany requested income data for the latest week, month and year. In those countries in which annual data was requested, several timed the surveys to approximately coincide with the filing of the income tax so that the respondent would have the information in mind. This was true for Canada, the United Kingdom and the United States. Several surveys provided for supplying data on income for a recent period such as a day, week or month or agricultural season. In Ceylon and Panama City where this was tried the data were then converted into monthly averages.

80. The collection of information on incomes by means of sample surveys of household budgets has also served as a means of classifying expenditure budgets by income size. For the latter purpose there is generally no need to classify the income statistics by detailed size classes. Accordingly fewer income-size classes are generally compiled on the basis of sample surveys than is the case when the primary object of the tabulation has been to provide income-size distributions. In a few surveys for which the income distribution data have been presented in a fairly large number of size classes as for example in the 1952 Survey of Consumer Finances for Ceylon and the survey of British Incomes and Savings, the number of income-size brackets used to classify various socio-economic characteristics or spending patterns of the families is much fewer than in the most detailed compilation of income data. For instance the
survey in Ceylon which provides an income distribution table using 20 income-size classes: uses but eight for classifying consumption by family income size. Most of the data in the British survey on family characteristics including spending, saving, liquid asset holding, etc. is classified according to five family income-size classes although income distribution data is provided for 12 income-size classes. Several family budget surveys in countries lacking other sources of income-size data have provided income-size distributions using a rather large number of size brackets. This practice appears of dubious value for rather small samples as it may result in very low cell populations.

Distribution of Income by Socio-Economic Characteristics

81. Most of the sample surveys examined and by which data on the incomes of individuals, families or other units has been collected have had as their primary purpose the measurement of expenditures or consumption. The extent and type of data on other socio-economic characteristics vary considerably. The most common has been the collection of demographic information regarding individuals, income units and heads of families. The collection of this data appears to have been in response to two needs; first to ascertain the extent to which the sample is representative on the basis of known demographic statistics and second to analyse the information on expenditures or consumption in terms of the factors affecting needs, such as the size and composition of the income unit, the location, etc. The first factor is undoubtedly important in the case of surveys designed to provide information on income-size distribution such as that of the United States Census Bureau or to provide data on the volume of savings as well as income such as that of the United Kingdom and Ceylon.

82. In the published results of most surveys, information collected on the characteristics of the family or other income or consumption unit used, as well as that collected on individuals not members of families or on the head of the family, is shown cross-classified according to the income size or to the average or medium income of the income unit possessing the same characteristics. The exact attributes dealt with and the manner of classification used varies rather widely so that it is seldom possible to make valid generalizations.
83. In general the classification of families or other income or consumption groups is limited to the number of members, geographical location, and such characteristics of the family head as age, sex, occupation, employment status, etc. The sample survey of family budgets for Barranquilla, Colombia, provides for classifying the family membership according to the relationship to the head of the family. Detailed classification of family members is usually in terms of individuals for such characteristics as age, sex, literacy, education, etc., though this is frequently cross-classified according to the size of the total family income. A number of surveys treat income receivers separately and some distinguish between those receiving wage and salary income only, and those with other types of income. In the Survey of British Incomes and Savings income units are classified according to the type of income and by income-size class for that income type.
TABLE 5. SOME SOCIO-ECONOMIC CHARACTERISTICS OF FAMILIES AND INDIVIDUALS OBTAINED FROM SAMPLE SURVEYS

(X denotes cross-classified by income-size class, 0 denotes not cross-classified by income-size class, the omission of an 0 or X indicates the data are not available)

<table>
<thead>
<tr>
<th></th>
<th>Brazil</th>
<th>Canada</th>
<th>Ceylon</th>
<th>Colombo City of</th>
<th>Barrenquilla</th>
<th>Guatemala City</th>
<th>Ireland</th>
<th>Netherlands</th>
<th>Puerto Rico</th>
<th>Portugal, Lisbon and Oporto</th>
<th>United Kingdom</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Number of Persons in Income Unit</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>B Geographic Location of Income Unit</td>
<td>X</td>
<td>0</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>C Number of Children in Income Unit</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>D Number of Income Earners in Income Unit</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>E Industrial Attachment of Income Receivers</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>F Head of Household - Age</td>
<td>X</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>G - Occupation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>X</td>
</tr>
<tr>
<td>H - Employment Status</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>I Individual Family Members or Families - Age</td>
<td>0</td>
<td></td>
<td></td>
<td>X</td>
<td>0</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
<tr>
<td>J - Sex</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
<tr>
<td>K - Race or Colour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>L - Schooling</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>M Relation of Family Members to Head</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>0</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>N Source or Type of Income</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O Expenditures by Major Type</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

84. Table 5 indicates for a few sample surveys some of the socio-economic characteristics more commonly used for classifying families or income receivers. This indicates the age, sex, and number of family members and children to be the most usual information in such classifications. While the occupational status of the head of the household is frequently used the concept of occupational status...
differs considerably from one survey to another. This is shown in the following:

Groups Distinguished under Concept of Employment Status

Canada
not in labour force
employee
employer or own account

Guatemala
labourers
commercial employees
government employees
workers on own account

Ireland
professional, employer or manager
salaried employee
skilled wage earner
semi-skilled or unskilled wage earner
retired or not gainfully employed

Portugal
professional, executive and higher officials
salaried employees
wage earners

United Kingdom
self-employed
managers, etc.
clerical and sales
skilled manual
unskilled manual
retired, etc.

United States
professional, technical and kindred
(self-employed, salaried separately)
farmers and farm managers
managers, officials and proprietors
(self-employed, salaried separately)
clerical and kindred workers
sales workers
craftsmen, foremen and kindred
private household workers
service workers except private household
farm labourers and foremen
labourers except farm and mine
armed forces and not employed

Factors Affecting the Accuracy of Income Data from Sample Surveys

85. The problem of accuracy in the reporting of data on individual or family income is present in the several methods used to collect such information. Income statistics based on personal income tax returns are subject to an unknown degree of evasion. This appears to be relatively low for countries with well developed tax systems especially when coupled with relatively low exemption levels and the use of tax withholding by employers. In a number of countries where such provisions are not the case the extent of tax evasion as judged from alternative measures of income appears to be significant.
86. Sample surveys not only lack the compulsion and penalties for inaccurate reporting included in most tax regulations but in addition to sampling variation would seem to be subject to larger errors of response and non-reporting. The last two are particularly important in connexion with sample surveys designed to obtain data on individual or family income size. Except where account books are used over relatively long periods the data are based on memory rather than records. The timing of surveys to approximately coincide with the filing of income tax returns is an attempt to reduce this factor. It is not however a method that is available in most countries which either lack personal income tax laws or where such taxes apply to a relatively small portion of the income receivers. Another method is to ask for the income of the latest period such as day, week or month and to check this against that furnished for a longer period such as a year. This appears to work fairly well in the case of income from wages and salaries but is less useful for other types of incomes. Income from property, and agriculture and other self-employment is especially difficult to obtain accurately and generally requires either the use of a long period such as a year or several shorter periods such as one month out of each quarter. The schedule used for the survey in Ceylon provides a detailed table to be used for the estimation of annual income from agriculture, trade and fishing.

87. Most of the schedules examined provide separate questions for different types of income as there appears to be a tendency for small amounts of property or other non-wage income to be omitted. A comparison between the results of the sample survey and the tax statistics in the United Kingdom suggests that while the survey data exceed that from the tax statistics for wage and salary income and profits of individuals and firms it notably understated the amount of rent, interest and dividends received by persons. In the United States the estimate of net money farm income from the Census Bureau's sample survey covered about 80 per cent of the comparable income concept estimated from marketing and other data, and the amount of property income derived by combining the data from the sample survey and tax statistics (the survey data does not show actual income for incomes over $10,000) equaled about 60 per cent of the same aggregate in the national income estimate. Another example of the undercoverage of income data obtained from sample surveys is found in the study
of household budgets in Ireland which indicated that expenditures exceeded income for all income-size groups nearly 25 per cent on the average.

88. Owing to the lack of other income totals it is not possible to assess the undercoverage of income data derived from sample surveys in the statistically under-developed countries. That it is fairly large for income from property and self-employment is likely. On the other hand to the extent that the survey is limited say, to peasant agriculture, it would seem possible to correct personal reporting by a knowledge of the size of holding, the nature of the cultivation and the terms of land tenure. Similarly surveys limited to working-class families may be fairly accurate to the extent that wages constitute almost the entire family income. A careful comparison between reported expenditures and reported income would involve some explanation of major differences and accordingly might lead to a correction of the income data.

89. The extent of errors due to non-reporting is difficult to assess. Several techniques have been used to reduce the extent of non-reporting though whether they have led to an over-all improvement in accuracy is not possible to judge. One is to pay families who co-operate a small sum as was done in the survey of 1952 in Ceylon.6 The West German income survey taken in Schleswig-Holstein in 1949, entirely by mail, carried a note to the effect that at the conclusion of the survey a lottery would be held for those making the returns and several substantial prizes awarded. To participate the person had to return a completed form. Some notion of the extent of non-reporting and incomplete or otherwise unusable schedules may be gained from Table 6.

6/ In general, experience has shown that the offering of rewards to families who co-operate does not always increase the accuracy of the results.
### TABLE 6. COUNTRY EXPERIENCE WITH NON-REPORTING OR UNUSABLE SCHEDULES IN SAMPLE SURVEYS

<table>
<thead>
<tr>
<th>Country</th>
<th>Date of Survey</th>
<th>Unit</th>
<th>Number of Units Selected</th>
<th>Number of Units Used in Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>1952</td>
<td>Families</td>
<td>9,000</td>
<td>5,600&lt;sup&gt;a/&lt;/sup&gt;</td>
</tr>
<tr>
<td>Ceylon</td>
<td>1952</td>
<td>Households</td>
<td>1,100</td>
<td>970</td>
</tr>
<tr>
<td>Guatemala</td>
<td>1946</td>
<td>Families</td>
<td>495</td>
<td>179</td>
</tr>
<tr>
<td>Ireland</td>
<td>1951-52</td>
<td>Households</td>
<td>6,300</td>
<td>3,700</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>1941-42</td>
<td>Families</td>
<td>4,999&lt;sup&gt;b/&lt;/sup&gt;</td>
<td>2,000&lt;sup&gt;c/&lt;/sup&gt;</td>
</tr>
<tr>
<td>&quot;</td>
<td>1941-42</td>
<td>&quot;</td>
<td></td>
<td>2,999&lt;sup&gt;d/&lt;/sup&gt;</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1952</td>
<td>Rateable units&lt;sup&gt;e/&lt;/sup&gt;</td>
<td>100%</td>
<td>75%</td>
</tr>
<tr>
<td>&quot;</td>
<td>1952</td>
<td>Income units</td>
<td>100%</td>
<td>69%</td>
</tr>
</tbody>
</table>

<sup>a/</sup> Non-farm families only. Also partial returns for 750 additional non-farm families and 1,150 farm families were received.

<sup>b/</sup> Number of families visited.

<sup>c/</sup> Complete schedule obtained on first visit.

<sup>d/</sup> Condensed schedules obtained on first visit.

<sup>e/</sup> Dwellings.

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### V. CONCLUDING REMARKS AND PROPOSED RECOMMENDATIONS

90. The collection of statistics on the distribution of income by size and other socio-economic characteristics of individuals and families is receiving increasing attention in many countries. In addition to complementing the various national income aggregates these statistics are directly useful for the analysis of many economic and social problems. In most countries, however, statistics on the distribution of income are relatively undeveloped at present. Considerable experimentation is being undertaken at present both as to methods of collection and compilation as well as to the usefulness of different concepts.
and definitions. Accordingly, it seems premature at this time to seek uniformity in the concepts, methods of collection and form of publication of such statistics through the recommendation of detailed and specific international standards. Instead the recommendations noted below are to be considered primarily as suggestions for compilation and presentation of such information as is collected on the characteristics of income receivers. In the main these suggestions are applicable to the collection of data on income distribution by sample surveys and censuses. Suggestions primarily applicable to the preparation of statistics from tax returns are noted separately.

A. It is recommended that the publication of statistics on the distribution of income include a full description of the scope and methods used as well as definitions of the concepts employed. It seems especially useful to include descriptions of the following: purpose and coverage of the survey, method of enumeration, concept of income and income unit used, and, where necessary, definitions of the various socio-economic characteristics used for classifying income receivers.

B. It is recommended that where applicable the total amount of income or receipts of each income unit be divided into approximately the following items and separate distributions be shown for each according to the size distribution of the total income of the income unit. Each class of receipts shown separately should be clearly defined.

1. earnings from personal service (wages and salaries, commissions, bonuses, tips, etc.)
2. income from property (rents, interest and dividends)
3. income from non-agricultural self-employment (including net receipts from boarders, lodgers and other household activities carried on for money income)
4. income from agricultural self-employment
5. income in kind
6. imputed net rent on owner-occupied dwelling (if collected)
7. private and government transfers
8. regular receipts from past savings, such as insurance, annuities and superannuation funds
(9) Single-time receipts from loans, gifts, insurance, inheritances, sale of capital assets and durable consumers goods including profit or loss, tax refunds, withdrawal of savings, etc. (if collected).

As a minimum it seems desirable to distinguish the following types of receipts:

- earnings of employees (1)
- income from self-employment (3) and (4)
- income from property (2)
- transfers and other regular receipts (7) and (8)

If not shown separately, income in kind (5) would be allocated to the relevant item, and imputed net rent (6) would be treated as property income.

- single-time receipts (9) if collected.

C. It is recommended that the income unit used be clearly defined with attention to the treatment of the following:

- (1) boarders and lodgers
- (2) members of family temporarily absent such as children at boarding school, members in military service, and those whose occupation causes them to be away for long periods
- (3) guests
- (4) domestic
- (5) income receivers included on basis of contribution of income to income unit for common use.

D. Although it is not possible to provide for uniformity in the sizes and numbers of class intervals in absolute amounts to be used in constructing income-size distributions, there appear to be several criteria, which if followed will enhance the usefulness of these statistics.

- (1) It is suggested that in distributions of absolute amounts sufficient income classes be used so that no more than ten to fifteen per cent of the number of income units or amount of total income would be included in any one income-size class.

- (2) When the coverage of the statistics tends to change, as for instance at the lower end of the distribution in distributions derived from tax returns, owing to differing exemptions it is desirable
that the lower limits of the smallest income interval having roughly the same coverage as the rest of the distribution, be set to clearly reflect this.

3. It seems desirable to indicate the limits of the income class intervals in a uniform fashion and it is suggested that these be stated as for example, 100-200, 200-300, etc., and that these be interpreted as including incomes of 100 and up to, but not including 200, etc.

E. For many purposes of analysis as well as for graphical presentation, as for example, by means of Lorenz curves, and especially for international comparison it is extremely desirable that the number of income units and amounts of income be shown as percentage in percentile distributions. For this purpose it is recommended that deciles be used for the income-class intervals.

F. The concept of income to which the class intervals of the income-size distribution refer, should be defined. This applies both to class intervals stated in absolute amounts as well as percentiles.

G. It is recommended that the median incomes be shown for all size distributions whether the latter are stated in absolute amounts or percentiles.

H. In addition to income size it is desirable to classify the income unit as well as its members by various socio-economic characteristics. Since the economic and social status of the family is in part dependent on the size of its current income the cross-classification by income size and various social characteristics is frequently an aid to analysis. Although most of these characteristics such as age, sex, occupation, etc., pertain to individuals it is usually desirable to classify them according to the income size of the family or other income unit used. Characteristics such as family size, number of income receivers, number of children and geographic location pertain directly to the income unit and are classified accordingly. The following cross-classifications in terms of family income size are recommended.

1. Age and sex of the members of the income unit. For this purpose the age intervals can generally be fairly large. It is frequently
desirable to fix one boundary of the age-class intervals at the normal school leaving age or the age at which individuals normally enter the labour market, and another at the normal age of retirement. In such a distribution it is useful to distinguish between the head of the family and the other members.

(2) Family size. Frequently this classification is more useful when subdivided according to the number of gainfully occupied members.

(3) Employment status of the head of the income unit. For this purpose employment status is defined in terms of the following groups: employees, self-employed, not in the labour force. If a further subdivision is desirable the following is suggested:

(a) employees
   labourers
   skilled and semi-skilled
   clerical and sales
   executives and managers

(b) self-employed
   professions
   farmers
   other

(c) not in labour force
   retired
   children
   others, male
   others, female

(4) Geographic area. While this classification is usually made on the basis of political subdivisions such as states, provinces, etc., for most analytic purposes these appear to have less significance than a classification in terms of distinct economic regions or in terms of a rural-urban division. It is recommended that the latter be given priority. In general the most significant classification appears to be that of rural farm and non-farm, and urban; the latter being divided into a few size classes of towns and cities.
(5) Relationship of other members to the head of the income unit. The chief relationships which appear to be of interest are: spouse, minor children, related adults and unrelated adults. Each group should be further subdivided as to sex.

I. For the purpose of assessing the representativeness of the sample as well as for other uses it is desirable to cross-classify individuals by age, sex, using age class intervals not larger than five to ten years.

J. Although the content of personal income tax statistics are determined in large measure by tax regulations a substantial improvement in their usefulness may be attained by attention to the following points:

(1) Clear definitions should be provided for such items as, reported income or its approximate equivalent (cf. para. 23), the separate types or sources of income for which separate income-size distributions are provided, and deductions for which separate income-size distributions are provided.

(2) In the definitions of income and exemptions attention should be given to the treatment of the following:
   (a) income in kind
   (b) imputed rent on owner-occupied dwellings
   (c) capital gains and losses
   (d) carry over of losses from previous years
   (e) expenses incurred in acquiring income
   (f) insurance premiums, contributions to pension funds, etc.
   (g) public assistance, relief benefits, gifts, inheritances and other public and private transfers
   (h) pensions, proceeds of life insurance, superannuation payments and other forms of retirement income excluding transfers
   (i) military pay allowances and benefits
   (j) joint-reporting of husbands, wives and other family members

(3) It is desirable to provide data on the number of dependents in terms of physical persons classified according to income size of the taxpayer.
(4) It is generally useful to provide separate income-size distributions by marital status of the taxpayer and to indicate separately joint returns of husband and wife.

(5) If non-taxable returns are available and are not included in the income-size distribution with taxable returns it is desirable to provide separate tabulations of these data.

(6) Note should be taken of the two main uses of sampling for the compilation of statistics on income-size distribution from tax returns.

(a) Sampling of tax returns directly can be used to reduce the expense and time required to prepare income-size distributions in terms of individual taxpayers.

(b) Sample surveys of households or samples drawn from population census returns may be used to obtain a sample of income receivers by household. These data can then be used to select the relevant income tax returns so they may be tabulated in terms of family or other income unit. This method also permits the income data from a sample of the tax returns to be classified according to the socio-economic characteristics obtained on the sample survey or population census.

91. The Statistical Commission may wish to request the Secretary-General:

(a) to circulate the report on statistics of the distribution of income and the draft recommendations among Member Governments for comments;

(b) to continue to collect information from countries on the methods used in statistics on the distribution of income;

(c) to submit a report at the next session of the Commission with revised recommendations to establish, to the extent practicable, international standards in this field.