



STATISTICAL PAPERS

Series **M** No. **44**

**PRINCIPLES  
AND  
RECOMMENDATIONS  
FOR THE  
1970  
POPULATION CENSUSES**

**SECOND PRINTING**

**with changes of a non-substantive nature**

**UNITED NATIONS**

DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS  
STATISTICAL OFFICE OF THE UNITED NATIONS

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## NOTE TO THE NEW EDITION

The present edition of *Principles and Recommendations for the 1970 Population Censuses* differs from the original photo-offset version in respect of certain non-substantive changes made in the text and the tabulation illustrations.

The majority of these changes were rendered necessary by the 1968 revision of the *International Standard Industrial Classification of All Economic Activities* (ISIC) and the 1966 revision of the *International Standard Classification of Occupations* (ISCO), neither of which was available at the time of the earlier issue of this publication. All references to the ISIC and the ISCO have therefore been brought up to date and each change made in this respect is identified by a foot-note explanation which indicates the nature of the change and the reason for it.

The opportunity has also been taken to effect minor editorial changes.

## PREFACE

The principles and recommendations for the 1970 population censuses were adopted by the United Nations Statistical Commission at its fourteenth session, in October 1966.<sup>1</sup> They are intended as a guide to help countries in planning and carrying out population censuses to be taken around 1970 and hence serve the same purposes for the 1970 censuses as did the *Principles and Recommendations for National Population Censuses*<sup>2</sup> for countries taking censuses around 1960.

The present recommendations have been developed over a period of years by a process of consultation between the United Nations, its regional economic commissions and individual countries. Regional recommendations on topics, definitions, classifications and tabulations for the countries of Africa, Asia, Europe and the Americas, respectively, have been developed concurrently and will be issued by the regional organizations. The regional recommendations are variants of the world-wide recommendations, and make special provision for regional needs and capabilities that cannot be adequately dealt with on a world-wide basis.

The United Nations recommendations are based primarily on the experience of countries with their 1960 censuses. Information in this respect has come from analyses of country experience prepared by the regional economic commissions<sup>3</sup> and the Inter-American Statistical Institute (IASI),<sup>4</sup> supplemented by a continuous study of population census methods, carried out by the Statistical Office of the United Nations on the basis of methodological material received from national statistical services.

In the preparation of the revised recommendations, account has also been taken of the considerations and recommendations relating to the 1970 censuses set forth by the working groups on censuses of population and housing in Africa,<sup>5</sup> Asia<sup>6</sup> and Europe<sup>7</sup> and by the

Sub-Committee on Demographic and Housing Statistics of the Committee on the Improvement of National Statistics (COINS) of the Inter-American Statistical Institute.<sup>8</sup>

Other valuable sources of information on the statistical needs of the different regions are the regional programmes of basic statistics, which comprise series most urgently required for planning economic and social development. Such programmes have been formulated by the Inter-American Statistical Institute<sup>9</sup> and by the Economic Commission for Asia and the Far East,<sup>10</sup> and a programme is being developed by the Economic Commission for Africa.<sup>11</sup> In the preparation of the *Principles and Recommendations*, account has been taken of these and of the *Statistical Series for the Use of Less Developed Countries in Programmes of Economic and Social Development*.<sup>12</sup>

A further point of reference has been the discussions of the subjects of interest to Governments concerned with social and economic development and the population census data required for studies of these subjects, which are found in *National Programmes of Analysis of Population Census Data as an Aid to Planning and Policy-Making*.<sup>13</sup> Much of the description of the uses of the recommended tabulations, set forth in part VI of the *Principles and Recommendations*, has been drawn from that publication. Similar information on statistics required for programmes of population projections has been derived from *General Principles for National Programmes of Population Projections as Aids to Development Planning*.<sup>14</sup> Consideration has also been given to the data requirements that population censuses may be called upon to supply for measurements of levels of living.<sup>15</sup>

A first draft of the 1970 recommendations was presented for the consideration of the Statistical Commission<sup>16</sup> and the Population Commission<sup>17</sup> at their respective thirteenth sessions, in 1965. Each Commission made preliminary comments on the draft.

<sup>1</sup> *Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 3* (E/4283), para. 85.

<sup>2</sup> United Nations publication, Sales No.: 58.XVII.5.

<sup>3</sup> "Methods and problems of African population censuses and surveys" (E/CN.14/CAS.3/3/Rev.1); "Analysis of national replies to the questionnaire on censuses of population and housing; Part one, General questions and questions relating to population censuses" (Conf. Eur. Stats/WG.6/94); "Analysis of national replies to the questionnaire on population and housing enquiries undertaken during the period 1955-1964; Part one, General questions and questions relating to population censuses" (E/CN.11/ASTAT/CPH/L.1).

<sup>4</sup> *Program of the 1960 Census of America. III. Censuses Taken. A. Social Cycle. 2. Topics, Concepts, Classifications and Tabulations. a. Population* (Inter-American Statistical Institute document 4938).

<sup>5</sup> "Report of the First Working Group on Censuses of Population and Housing" (E/CN.14/CAS.4/CPH/11); "Report of the Second Working Group on Censuses of Population and Housing" (E/CN.14/CAS.5/CPH/8).

<sup>6</sup> "Report of the Working Group on Censuses of Population and Housing" (E/CN.11/ASTAT/CONF.6/L.10); "Report of the Second Working Group on Censuses of Population and Housing" (E/CN.11/ASTAT/CONF.7/L.4).

<sup>7</sup> "Report of the fifth session of the Working Group on Censuses of Population and Housing" (Conf. Eur. Stats/WG.6.97); "Report of the sixth session of the Working Group on Censuses of Population and Housing" (Conf. Eur. Stats/WG.6/112).

<sup>8</sup> Draft report, "I session of the Sub-Committee on Demographic and Housing Statistics" (IASI document 5121).

<sup>9</sup> *Conclusions of the VIII Session of COINS. I. Inter-American Program of Basic Statistics* (IASI document 4921); *Inter-American Program of Basic Statistics* (PIEB) (IASI document 5031).

<sup>10</sup> *Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East* (United Nations publication, Sales No.: 65.II.F.8).

<sup>11</sup> "Statistical development in Africa", a draft revision of "Use of the Revised List of Basic Statistics for Programming Statistical Development in Africa" (E/CN.14/CAS.3/9).

<sup>12</sup> United Nations publication, Sales No.: 59.XVII.10.

<sup>13</sup> United Nations publication, Sales No.: 64.XIII.4.

<sup>14</sup> United Nations publication, Sales No.: 65.XIII.2.

<sup>15</sup> *International Definition and Measurement of Levels of Living. An Interim Guide; Report on International Definition and Measurement of Standards and Levels of Living* (United Nations publications, Sales Nos.: 61.IV.7 and 54.IV.5).

<sup>16</sup> "Principles and recommendations for a population census: draft recommendations for the 1970 censuses" (E/CN.3/330).

<sup>17</sup> "Principles and recommendations for a population census: draft recommendations for the 1970 censuses" (E/CN.9/200).

In accordance with resolution 13 (XIII) of the Statistical Commission,<sup>18</sup> the draft was then circulated to States Members of the United Nations or of the specialized agencies, to regional economic commissions, to other regional bodies and to interested specialized agencies, for their review. A second draft was subsequently prepared, taking into account the suggestions of the commissions and the comments received as a result of the circulation of the first draft. The second draft was reviewed by a small group of international experts in population and housing censuses,<sup>19</sup> whose recommendations were incorporated into a third draft, which was submitted to the Statistical Commission at its fourteenth session, in 1966.<sup>20</sup>

The Statistical Commission adopted the principles and recommendations, with some modifications, and emphasized the important contribution that they would make to the improvement of the collection, collation, analysis and dissemination of statistical information required to chart the progress made towards achieving the objectives of the United Nations Development Decade.<sup>1</sup> The Commission requested the Economic and Social Council to adopt the following draft resolution:

*"The Economic and Social Council,*

*"Taking note of the report of the fourteenth session of the Statistical Commission and the adoption by the Commission of principles and recommendations for population censuses and housing censuses to be taken around 1970,*

*"Recalling General Assembly resolution 1710 (XVI) of 19 December 1961 on the United Nations Development Decade, which requests the Secretary-General to develop proposals for the intensification of action in the fields of economic and social development with particular reference to the need to review facilities for*

<sup>18</sup> *Official Records of the Economic and Social Council: Thirty-ninth Session, Supplement No. 13 (E/4045).*

<sup>19</sup> "Report of the Expert Group to Review the Draft Recommendations for the 1970 Population and Housing Censuses" (E/CN.3/344).

<sup>20</sup> "Principles and recommendations for a population census: draft recommendations for the 1970 censuses" (E/CN.3/342).

the collection, collation, analysis and dissemination of statistical and other information required for charting economic and social development and for providing a constant measurement of progress towards the objectives of the Decade,

*"Recognizing the important role of population censuses and housing censuses as primary sources of basic national data for achieving the above-mentioned purposes,*

*"Further recalling its resolution 1054 B (XXXIX) of 16 July 1965, which (a) requests the Secretary-General to proceed with the development of 1970 World Population and Housing Census Programmes and (b) recommends that States Members of the United Nations undertake to carry out population and housing censuses during the period 1965-1974 and that they take into account the international recommendations in order that the censuses may meet national requirements and facilitate the study of population and housing problems on a world-wide basis,*

*"1. Requests the Secretary-General to publish the 'Principles and Recommendations for a Population Census' (E/CN.3/342) and the 'Principles and Recommendations for a Housing Census' (E/CN.3/343) as modified, and to distribute copies to States Members of the United Nations, to members of the specialized agencies, to appropriate regional bodies, and to specialized agencies;*

*"2. Further requests the Secretary-General to give assistance to Governments in the implementation of these principles and recommendations by mobilizing all available resources to help in the very large task of meeting the needs of countries in this area, and by the revision of the Handbook of Population Census Methods, the preparation of a technical manual on methods of evaluating population and housing census results, and the provision of technical advice and fellowships under the United Nations Development Programme."<sup>21</sup>*

<sup>21</sup> *Official Records of the Economic and Social Council, Forty-Second Session, Supplement No. 3 (E/4283), resolution 5 (XIV).*

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## INTRODUCTION

1. The purpose of a population census is primarily to satisfy certain national needs for statistical data; those needs are the major factors in determining the content of the census. Both the content of the census and the operations undertaken to secure the needed data and to make them available for use can, however, be improved by applying the relevant experience of other countries which have carried out successful census enumerations. In addition, international uses of census data are important, and a desirable goal is the increase of the international comparability of census data through the use of standard lists of census topics and of uniform definitions, classifications and tabulations.

2. The objectives of the United Nations principles and recommendations are, therefore, both to improve the census operations and the value of the compiled census results for national purposes and, wherever possible, to increase international comparability. The recommendations stress the need for the collection and tabulation of those data which are required for demographic research and for formulating national programmes in population policy, housing, health, manpower, education, food and nutrition and so forth. The principles emphasize the importance of evaluating the accuracy of census results, of considering the use of sampling in census taking and of adopting modern methods of data processing to speed the release of census results.

3. The *Principles and Recommendations* are set forth in six parts and an annex. Part I deals with the definition, essential features and uses of a population census. Part II consists of statements of widely recognized principles of efficient census planning and administration. These principles of census management are based on detailed studies of successful census procedure and upon a synthesis of expert opinion. They are stated here in concise terms for the consideration and use of countries as an aid in improving the

efficiency, economy and quality of national census operations. Part III is a brief exposition of the role of sampling in the various phases of a population census. Part IV deals with the unit and place of enumeration. Parts V and VI contain specific recommendations regarding census topics, definitions, classifications and tabulations. Each tabulation presented is accompanied by a sketch illustrating the required attribute classifications.

4. The annex shows, for each topic included in the world programme, whether or not it has been included as basic in each of the four regional programmes for the 1970 population censuses.

5. Since neither the general principles nor the specific recommendations are mandatory for Governments, it has not been considered necessary or desirable to make a sharp distinction between the two kinds of standards. While somewhat different in purpose, both the principles and the recommendations are an expression of tested national census practice in so far as these can be stated in general terms for worldwide application. They are applicable to national censuses of sovereign and non-sovereign countries and also to censuses at a subnational level.

6. A guide to their implementation will be provided in the future revision of the *Handbook of Population Census Methods*, in which both the principles and the recommendations will be discussed in greater detail. Until the revision becomes available, the present edition of the *Handbook*,<sup>1</sup> which was prepared in connexion with the recommendations for the 1960 censuses, can usefully be consulted.

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<sup>1</sup> *Handbook of Population Census Methods: Vol. I, General Aspects of a Population Census; Vol. II, Economic Characteristics of the Population; Vol. III, Demographic and Social Characteristics of the Population* (United Nations publication, Sales No.: 58.XVII.6, vols. I, II, III).

## Part I

### DEFINITION, ESSENTIAL FEATURES AND USES OF A POPULATION CENSUS

#### A. DEFINITION OF A POPULATION CENSUS

7. Population is basic to the production and distribution of material wealth. It is impossible to plan for, and carry out, economic and social development, administrative activity or scientific research without precise and detailed data on the size, distribution and composition of population. The population census is a primary source of these data.

8. A census of population is the total process of collecting, compiling, evaluating, analysing and publishing demographic, economic and social data pertaining, at a specified time, to all persons in a country or in a well-delimited part of a country.

#### B. ESSENTIAL FEATURES OF A POPULATION CENSUS

9. The essential features of a population census are individual enumeration, universality within a defined territory, simultaneity and defined periodicity.

##### (1) *Individual enumeration*

10. A "census" implies that each individual is enumerated separately and that characteristics of each person in the total population, or in a representative sample of the total population, are separately recorded. Only by this procedure can the data on the various characteristics of an individual (e.g., age, literacy, occupation) be cross-classified. A procedure of "group enumeration" is not a census in the strict sense of the term because the recording of aggregated or summarized information on the characteristics of a group of persons usually precludes the cross-tabulation of data on several characteristics. Even though a well-designed "group enumeration" can produce cross-classifications of certain individual characteristics, such as sex and age, the possibilities in this respect are so limited that the procedure is not recommended for general use, particularly since it tends to result in under-enumeration of the population.

11. Individual enumeration does not preclude the use of sampling techniques for obtaining data on specified characteristics, provided that the sample design is consistent with the size of the areas for which the data are to be tabulated and the degree of detail in the cross-tabulations to be made.

##### (2) *Universality within a defined territory*

12. The census should cover a precisely defined territory (e.g., the entire country or a well-delimited part of it) and, depending upon the type of population count required, should include every person present and/or residing within its scope, without omission or duplication.

##### (3) *Simultaneity*

13. Each person should be enumerated as nearly as possible in respect of the same well-defined point of time and the data collected refer to a well-defined reference period. The time-reference period need not, however, be identical for all of the data collected. For

most of the data, it will be the day of the census; in some instances, it may be a period prior to the census (see paragraph 158).

##### (4) *Defined periodicity*

14. Censuses should be taken at regular intervals so that comparable information is made available in a fixed sequence. A series of censuses makes it possible to appraise the past, accurately describe the present and estimate the future.

#### C. INTERNATIONAL SIMULTANEITY

15. The census data of any country are of greater value nationally, regionally and internationally if they can be compared with the results of censuses of other countries which were taken at approximately the same time. It is, therefore, recommended that, whenever possible, each country undertake a population census in the years ending in "0" or as near to those years as feasible.

16. It is obvious, however, that legal, administrative, financial and other considerations often make it inadvisable for a country to adhere to a standard international pattern in the timing of its population censuses. In fixing a census date, therefore, such national factors should be given greater weight than the desirability of international simultaneity.

#### D. USES OF A POPULATION CENSUS IN AN INTEGRATED PROGRAMME OF DATA COLLECTION

17. As part of an integrated programme of data collection, the population census is the primary source of basic national population data required for administrative purposes and for many aspects of economic and social research and planning. The value of the census results is increased if they can be employed together with the results of other investigations, as in the use of the census data as a base or bench-mark for current statistics. The usefulness of the census is also enhanced if it can furnish the information needed for conducting other statistical investigations. It can, for example, provide a statistical frame for other censuses and sample surveys. The purposes of a continuing programme of data collection can best be served, therefore, if the relationship between the population census and other statistical investigations is considered when census planning is under way and if provision is made for facilitating the use of the census and its results in connexion with intercensal sample surveys, with continuous population registers, with other types of censuses and with civil registration and vital statistics, and with labour force, educational and similar statistics. The use of consistent concepts and definitions throughout an integrated programme of data collection is essential if the advantages of these relationships are to be fully realized.

##### (1) *Uses of census data for administrative and policy purposes*

18. The original and fundamental purpose of the

census is to provide the facts essential to governmental administration and policy. One of the most basic of the administrative uses of census data is in the demarcation of constituencies and the allocation of representation on governing bodies. Detailed information on the geographic distribution of the population is indispensable for this purpose. Certain aspects of the legal or administrative status of territorial divisions may also depend on the size of their populations.

19. Information on the geographic distribution of the population, its size and its other characteristics is essential to the study and evaluation of economic and social problems, which must precede the determination of policy affecting economic and social development. Consideration of questions of employment and manpower programmes, migration, housing, education, public health and welfare, social services, economic and social planning, and numerous other aspects of the life of a country, are facilitated if accurate information about the characteristics of the population is available for civil and other administrative divisions.

#### (2) *Uses of census data for research purposes*

20. In addition to specific administrative purposes, the population census provides indispensable data for the scientific analysis and appraisal of the composition, distribution and past and prospective growth of the population. The changing patterns of urban-rural concentration, the development of urbanized areas, the geographic distribution of the population according to such variables as occupation and education, the evolution of the sex and age structure of the population, and the mortality and natality differentials for various population groups, as well as the economic and social characteristics of the population and labour force, are questions of scientific interest which are of importance to both pure research and practical problems of industrial and commercial growth and management.

#### (3) *Uses of census data for business and industry*

21. In addition to those given above, the census has many important uses for individuals and institutions in business and industry. Reliable estimates of consumer demand for an ever-expanding variety of goods and services depend on accurate information on the size of the population in subnational areas and its distribution at least by age and sex, since these characteristics heavily influence the demand for housing, furnishings, food, clothing, recreational facilities, medical supplies and so forth. Furthermore, the local availability of labour for the production and distribution of such commodities and services may be important in determining the location and organization of enterprises.

#### (4) *Relationship of the population census to sample surveys*

22. The rapidity of current changes in the size and other characteristics of populations and the demand for additional detailed data on social and economic characteristics which are not appropriate for collection in a full-scale census, have brought about the need for continuing programmes of intercensal sample surveys to collect current and detailed information on many topics which are usually investigated at ten-year intervals in the population censuses.

23. The census can provide the frame for scientific sample design in connexion with such surveys (see paragraphs 140-143); at the same time, it provides

bench-mark data for evaluating the reasonableness of the over-all survey results as well as a base against which changes in the characteristics investigated in both inquiries can be measured. To permit comparison of census and survey results, the definitions and classifications employed should be as nearly alike as possible consistent with the aims of each investigation.

#### (5) *Relationship of the population census to continuous population registers*

24. Population censuses have been used in some countries as the starting point for the establishment of a continuous population register. If a register is already in operation, results of subsequent censuses can be compared with register data as a check on the accuracy of both. Information from each source can be transferred to the other, as required and appropriate, after investigation and resolution of discrepancies.

#### (6) *Relationship of the population census to electoral rolls*

25. Some countries have taken advantage of the enumeration for a population census to collect, at the same time, information needed for the establishment of electoral rolls. This procedure is not generally advisable because of the deleterious effect the secondary purpose might have on the quality of the census results. It increases the burden on the enumerator and it may tempt some respondents deliberately to falsify their replies to some census questions (e.g., on age or citizenship) in order to appear eligible for placement on the electoral roll.

#### (7) *Relationship of the population census to other types of censuses*

26. Certain information collected as part of a population census, or incidental to it, can be most useful in conducting and/or utilizing the results of housing, agricultural or establishment censuses taken at about the same time as the population census.

##### (a) *Census of housing*

27. An especially close association exists between population censuses and housing censuses. The two censuses may comprise one statistical operation or they may be two separate but well co-ordinated activities, but they should never be considered completely independently of each other because essential elements of each census are common to both. For example, an essential feature of a population census is the identification of each occupied set of living quarters and of the persons living therein, and an essential feature of a housing census is the collection of information on the characteristics of each set of living quarters in association with the number and characteristics of its occupants.

28. In many countries, the population and housing censuses are taken concurrently, often with the use of a single schedule. In this way, the information on population and living quarters can be more readily matched, processing is facilitated and extensive analysis can be carried out. This also makes it possible to relate to the housing census data the information on demographic and economic characteristics of each household member which is routinely collected in the population census; if this information cannot be taken from the population census, it has to be collected in the housing census.

29. The advantages of simultaneous investigation may be offset to some extent by the additional burden on the respondent and the enumerator resulting from the increased amount of information which must be collected at one time. In countries where this is likely to be a serious problem, consideration might be given to collecting data for a limited number of topics on the basis of a complete enumeration in the population and housing census, with more complex data in both fields being collected on a sample basis only, either concurrently with or immediately following the full enumeration.

#### (b) *Census of agriculture*

30. Population censuses and agricultural censuses do not have as close an association as that existing between population censuses and housing censuses because they do not have common essential aspects.

31. Although both the population census and the agricultural census can provide information on persons engaged in agriculture, they do not have a common definition of this group of persons. For the agricultural census, the group (referred to as "persons employed in agricultural work") consists of persons employed in farm work or planning necessary to the operation of an agricultural holding.<sup>2</sup> Because information on these persons is always collected in relationship to a given holding, persons working on more than one holding during the census reference period may be counted more than once in the census. In a population census, information is obtained on persons principally engaged in the agricultural industry or at least on persons engaged in an agricultural occupation. Persons who worked on an agricultural holding only incidentally during the reference period might not be included in either of these categories. Precisely because of the differences in definition, however, it may be useful for a country to have both types of information for comparative purposes.

32. In the preparation of an agricultural census, information from a recent population census can be utilized for demarcation of enumeration areas, the preparation of the frame for the census and the designing of the sample if a complete agricultural enumeration is not undertaken. In planning for a population census, consideration might be given to the possibility of collecting some agricultural information which would facilitate the preparation of a subsequent agricultural census.

33. If it is desired to collect information in an agricultural census on some demographic or social characteristics of persons employed in agricultural work or of the farm population,<sup>3</sup> it would be useful to employ the same definitions and classifications of such characteristics as are used in the population census, in order to permit as high a degree of comparability as possible between the results of the two censuses. In some cases, the utilization of supplementary sample surveys in connexion with either census may serve to provide the information desired on the relationship between the characteristics of the population of holdings and the characteristics of the holdings.

<sup>2</sup> Food and Agriculture Organization of the United Nations, *Program for the 1970 World Census of Agriculture* (Rome, 1965), p. 51.

<sup>3</sup> For the definition of "farm population", see *Program for the 1970 World Census of Agriculture*, p. 56.

#### (c) *Census of establishments*

34. Although the collection of information on industrial and commercial establishments is not a part of the population census, some of the information which is collected regarding economic characteristics of individuals can be used for preparing listings of the proprietors of such establishments and/or of the establishments themselves. Experience shows that these listings can be used in a subsequent census of establishments or for supplementing the registers of establishments which are maintained by most countries and utilized in their establishment censuses. Since most of the registers cover at least all establishments in which more than a minimum of persons (e.g., five or ten) are employed, it is usually only necessary to obtain information through the population census on smaller establishments, particularly those operated by self-employed persons.

35. The population census information needed for these purposes is the industry and status (as employer, employee, own-account worker etc.) of economically active persons, the name and address of their establishments (if any) and (for employers) the number of employees. If all of this information appears on the census questionnaire, the data for the small employers and own-account workers can be extracted from the schedule or from the processing documents after the enumeration. If only industry and status appear on the schedule, the remaining information may be obtained from the desired group at the time of the population census enumeration and entered on a separate schedule.

#### (8) *Relationship to civil registration and vital statistics*

36. Census data serve as denominators for the computation of vital rates, especially rates specific for characteristics normally investigated only at the time of the census. Conversely, census results, time-adjusted by vital and migration statistics, can provide estimates of the future size, distribution and other characteristics of the population of the total country and subnational areas. Further, census data on fertility can provide a bench-mark check on the reliability of current birth statistics. It is consequently desirable that procedures for the collection of census data, vital statistics and migration statistics be closely co-ordinated with regard to coverage, concepts, definitions, classifications and tabulations.

37. It may be noted that some countries have used the census of population to produce an independent list of infants under one year of age against which to check the completeness of the birth register. Similarly, where the birth registers are thought to be sufficiently complete, the same cross-checking procedure has been used to evaluate the completeness with which infants are enumerated at the census. However, the one-to-one matching involved poses many problems and these difficulties should not be overlooked in planning to utilize the census schedules and the birth records in this way.<sup>4</sup>

38. Countries which desire to promote the development of civil registration in a representative sample of registration areas can use the population census enumeration areas as a frame for the selection of the sample.

<sup>4</sup> See *Handbook of Vital Statistics Methods* (United Nations publication, Sales No.: 55.XVII.1), chap. XIV.

## Part II

### PLANNING, ORGANIZATION AND ADMINISTRATION OF A POPULATION CENSUS

39. The population census is one of the most extensive and complicated statistical operations, consisting of a complex series of closely interrelated steps which must be carefully planned in advance so that a proper and uninterrupted sequence of operations can be maintained. A small oversight in planning may lead to serious defects and inefficiencies. Careful planning of the census is, therefore, of the first importance to the successful conduct of the operation, not only in countries with comparatively little statistical experience but also in countries with a developed system of statistics.

40. Censuses cannot all follow a uniform pattern but there are certain common major elements which must be taken into account in all censuses. In general, census operations can be divided into seven sequential phases: (a) preparatory work, (b) enumeration, (c) data processing, (d) evaluation of the results, (e) analysis of the results, (f) dissemination of the results and (g) systematic recording of census experience. It will be readily apparent that these phases are not entirely chronologically separate or mutually exclusive. For example, a post-enumeration check may be undertaken simultaneously with the tabulation of the results of the regular enumeration. Furthermore, certain elements which are discussed under "Preparatory work", such as the budget and staff, may have to be amended according to circumstances which arise at a later stage of operation. In addition, the systematic recording of census experience should start with the beginning of the preparatory work and continue through all the subsequent phases.

41. The elements of each of the phases, which are briefly discussed below, are intended, therefore, only as indicators of the points to be considered in planning and executing a census.

#### A. PREPARATORY WORK

##### (1) *Legal basis for a census*

42. Legal authority for the census is required for fixing primary administrative responsibility, for obtaining the necessary funds, for determining the general scope and timing of the census and for placing a legal obligation upon the public to co-operate and to give truthful answers and a legal obligation upon the enumerator to record the responses faithfully. In countries which lack permanent legal authority for the taking of periodic censuses, it is important to act early to establish *ad hoc* legal authority or, preferably, legislation calling for a system of periodic censuses.

43. The principle of conceptual and organizational flexibility should be observed in drafting the census legislation. Thus, the inclusion of too rigid provisions regarding the type of data to be collected, or the structure and relationships of the various parts of the census organization, is undesirable. Necessary details should, rather, be contained in the census regulations which are promulgated by the census authorities. On

the other hand, the confidentiality of the individual information should be strongly and clearly established in the census legislation and guaranteed by adequate sanctions so as to form a basis for the confident co-operation of the public.

##### (2) *Budget and cost control*

44. No universal system of census budgeting and cost control can be suggested since financial practices vary greatly among countries. However, a few generally accepted principles can be noted. Effective planning and control of the various census operations is not possible without a very careful financial estimate of the cost of each census operation. No part of the census work is too small to be clearly recognized as a component of the total cost. It is important that persons at the administrative and supervisory levels who will be responsible for the execution of each operation participate in estimating the budget items. Such an organization of the work presupposes detailed advance planning and "cost-consciousness" on the part of those responsible for a census. The census plan as executed may change in some respects after the making of the original calculations and consequently a perfect correspondence between the estimates and the final costs is not to be expected. Throughout the subsequent period of census-taking and compilation of the results, the budget will have to be re-examined and performance compared with plan. This will indicate the existence of any inefficiencies and often act as an impetus to required economies or innovations. A budget plan must have elements of flexibility and the available resources will be used most effectively by working out as precisely as possible the volume, rates and cost of each operation in the different sections of the job.

##### (3) *Census calendar*

45. An indispensable aid in the planning of a census is a calendar or time-table indicating the sequence and estimated duration of each of the component operations of the census. At the early stages of census planning, it is important to prepare a provisional calendar, which should be revised and made final as early as practicable.

46. Such calendars are essential, since they indicate the dates on which each of the numerous operations which make up a census are to be started and completed, and they serve as a guide for measuring the progress of each stage of the census operation. Serious delays in work, on errors in time estimates, can be detected by comparing the calendar target dates with the actual dates of each operation. Obviously, the time schedule will differ for each national census depending upon the general census plan and the resources that are available. Census calendars sometimes take the form of a chart or graph, in addition to a detailed check list of operations.

47. The census calendar usually shows the various operations grouped into three broad sectors: (a) pre-

enumeration, (b) enumeration and (c) post-enumeration. For purposes of control, many operations which in fact overlap are shown separately in the calendar.

48. In establishing the census calendar, it is necessary to consider the relationship of the census to other statistical projects. Although a population census is likely, for the period of its duration, to constitute the major statistical undertaking of the Government, care should be taken that it does not unduly interfere with the other regular statistical activities which might be going on at the same time. A balanced statistical programme should, however, also avoid too many simultaneous, competing inquiries which might place too heavy a burden on the statistical services and on the public, with a possible resultant loss of both administrative efficiency and public co-operation.

#### (4) *Administrative organization*

49. In planning the organization and administration of a census, it is important to consider the role and relationship of the various executive and advisory organs. National, subnational and local commissions and committees frequently may be useful in the planning and preparation of a census. Such bodies may be composed of representatives of governmental agencies and of non-governmental users of the census data. It is, however, important that their promotional and advisory functions be well defined and that the final responsibility for planning rests with the executive agency.

50. There are definite advantages in having an office continuously responsible for census work as an integral part of the statistical system of a country. Such an office assures continuity in census work and is the principal centre for the formulation of the programme and the initiation of preparatory work for the next census. Its permanency permits the development of specialized and experienced personnel and the maintenance of files of statistical and geographic information essential for planning the next census.

51. At the pre-enumeration stage, the census office will need to be expanded to form the nucleus of the full census organization, which must be capable of directing the field organization during the preparatory work as well as during the conduct of the enumeration. In order to provide immediate supervision in each area, field offices at various levels are needed for the later part of the preparatory work, including staff recruitment and training, as well as for the enumeration period. Supervisory personnel in such offices should be persons familiar with the particular area and with the local language, who are able to deal with local problems. This does not mean, however, that all supervisory positions must be filled by persons from the area. As the need arises, personnel may be transferred from the central office or from other areas.

52. Subsequent to the enumeration, the census organization is usually readjusted to meet the needs involved in compiling, evaluating, analysing and publishing the results, and to provide the continuity desirable for promoting the continued use of census materials and the development of improved methods.

#### (5) *Cartographic (mapping) work*

53. The determination, for the purpose of the census, of the national and internal boundaries of the territory and its detailed subdivision into enumeration areas is one of the basic and most important census operations and generally takes a considerable part of the time and

effort invested in the pre-enumeration stage. The prevention of omissions and duplications in the enumeration depends to a very large extent on the proper delimitation of the enumeration areas, which, in turn, is dependent upon the accuracy of the detailed maps available. All available maps which are known to be accurate should be utilized and new maps prepared as required. It is necessary to start cartographic work sufficiently early to ensure that an adequate supply of maps is available three to four months before the census is scheduled to begin.

54. The time and expense involved in preparing and checking maps and in the careful drawing of enumeration areas are further justified by their subsequent use for non-census purposes and particularly as they constitute frames for post-censal sample surveys.

55. As a supplementary method of identifying small areas, a systematic, complete and up-to-date listing of localities may be used. Such a listing is also needed for the coding of place names at the tabulation stage. In some regions, the establishment of a definitive list of localities is a major operation because of difficulties arising from the frequent fragmentation, disappearance or combination of small localities, and from changes in name, variations in spelling, the existence of more than one name for the same place or the use of identical names for different places.

#### (6) *Living quarters and household listing*

56. A list of living quarters, structures containing living quarters, or households, available at the start of the census, is an aid in the control of the enumeration. Such a list is also useful for estimating the number of enumerators and the number of schedules and other census materials needed in an area and for estimating the time required for the enumeration.

57. Consideration should be given to providing permanent identification to streets and buildings, which can be used for successive censuses and for other purposes. A listing of living quarters, particularly in densely settled places, cannot be accomplished unless streets have names and buildings have unique numbers. Where these prerequisites do not exist, numbering immediately prior to the census would prove useful.

#### (7) *Tabulation programme*

58. In most censuses, the tabulation programme represents a compromise between the information that it would be ideally desirable to tabulate and the limits imposed by practical circumstances. It is essential that the programme be outlined sufficiently early so that the procedures and costs involved may be investigated thoroughly before a final decision is reached. The testing of questionnaires will help to indicate if it will be reasonably possible to gather the material desired for tabulation. The type of questionnaire and the method of enumeration may limit the kinds and amount of data it is possible to collect, while the data-processing resources available will determine the number and complexity of the tabulations which can be accomplished within a reasonable time. The basic tabulation programme should be decided upon and justified in sufficient time so that the final drafting and reproduction of the questionnaire can be accomplished well before the enumeration date.

59. It is important to plan the tabulation programme in such a way that final results can be issued within a reasonable period of time after the enumeration and

before the information has become out of date for current needs. It is desirable that the details of the tables to be prepared and the order of their preparation be decided early in the planning so that the processing of the data will not be delayed.

#### (8) *Questionnaire preparation*

60. The type of questionnaire, its format and the exact wording and arrangement of the questions merit the most careful consideration, since the handicaps of a poorly designed questionnaire cannot be overcome during or after enumeration. Among the many factors which should be taken into account in designing the questionnaire are the method of enumeration, the type of questionnaire, the data to be collected, the most suitable form of the questions and their arrangement and the processing techniques to be employed.

61. The method of enumeration (see paragraphs 68-69) governs to some extent the type (i.e., single individual; single household or single living quarters; multiple household or multiple living quarters) and the scope of the questionnaire which can be used, as well as the framing of the questions and the amount of explanatory material which must accompany them. Questions should be free from ambiguity and should not be offensive. Many decisions regarding processing are dependent on the final content, form and arrangement of the questionnaires.

62. Questionnaire design should be considered jointly with consideration of the tabulation programme. This is essential if the questionnaire is to be designed to provide the information needed for the tabulations. It is also necessary because the feasibility of the tabulation programme is, to some extent, conditioned by the limitations imposed by the questionnaire. The final questionnaire must be drafted in time to allow for proper training of census officials, for adequate publicity on its content and for any delays in printing.

#### (9) *Census tests*

63. The testing of various aspects of a census plan prior to the enumeration is a very useful practice for all countries; it is essential for countries without a long history of census-taking and for those where fundamental changes in census methods are being considered. Census tests can be designed for different purposes and in different ways. To yield full benefits, tests should be employed for all stages of the census, including enumeration, processing and evaluation of results. They can give important information on the adequacy of the field organization, the training programme, the processing plan and other important aspects of the census. They are particularly valuable to test for weaknesses in the questionnaire, instructions or enumeration procedures which might affect the quality of the data. They can be designed to provide information on the relative efficacy of alternate methods of enumeration and on the average time required for enumerating a single household, which information is useful in estimating the staff and cost requirements. In addition, they serve as practical training for the nuclear staff of supervisors and other officials. A distinction should be made between tests of the census plan and a pilot census. Although the term "pilot census" is sometimes used to designate a test which encompasses the preparatory, enumeration and processing stages of a census, it might more properly be reserved for a sub-national census which is intended to explore the

feasibility of, and the requirements for, a subsequent national census.

#### (10) *Plan of enumeration*

64. The complete enumeration plan should be prepared well before the enumeration begins. This involves (a) the determination of the enumeration method to be used (see paragraphs 68-69) and the basic procedures to be followed in the collection of the data and the control of the enumeration, (b) the procedures for the control of the quality of the data and (c) an estimation of the probable size of the population to be enumerated, so that the number of questionnaires and other materials required for the enumeration and the number of enumerators and supervisors needed can be properly ascertained.

#### (11) *Plans for data processing*

65. The plans for the processing of the data should be completed before the enumeration begins so that processing can start immediately upon receipt of the completed questionnaires. The decision on the type of processing to be used must be made early in the planning stage, both because of its effect on the design of the questionnaire and because machine processing requires a long lead time for acquisition of machines, training of personnel and programming the operation. This is particularly important if electronic data processing is to be used.

#### (12) *Publicity*

66. Arranging the publicity for the census is another of the important tasks in the pre-enumeration stage and entails an educational campaign, the purpose of which is to enlist the interest and co-operation of the public. Its aims, as a general rule, are not only to dissipate any anxiety regarding the purposes of the census but also to explain the reasons for the various questions on the questionnaire and to give some guidance as to the manner in which these questions should be answered. It is desirable that the publicity campaign start as soon as the census is authorized, be gradually intensified until the enumeration is completed and then appropriately adapted to the post-enumeration stages. The campaign should be directed to all sections of the country and all segments of the population through the use of all available media of publicity. Greater effectiveness can be achieved when the publicity is carried out according to a programme suitably synchronized with the various steps of the preparatory work and the following stages of the census.

#### (13) *Staff recruitment and training*

67. Early and adequate arrangements are necessary to secure the proper number and type of personnel required for each of the various census operations. While the preparatory and processing work generally call for office employees possessing, or able to learn, certain specialized skills (cartographers, coders, punchers etc.), the enumeration stage usually demands a large number of persons capable of going to their assigned urban or rural enumeration areas and of collecting the information according to specific definitions and instructions. For reasons of efficiency and economy, it is important that the staff be selected on the basis of competence. An in-service training programme covering each phase of the work provides an efficient and consistent means of effectively starting large

numbers of employees in their work. Such training should correspond closely to the needs of the various operations and, where appropriate, may include both theoretical and practical instruction. In addition, consideration should be given to the utilization of the same staff for successive operations, thus reducing the turnover of personnel.

## B. ENUMERATION

### (1) *Method of enumeration*

68. There are two major methods of enumeration. In the *canvasser (or enumerator) method*, information for each individual is collected and entered on the questionnaire by a census official designated to perform this operation in a specified area. In the *householder method*, the major responsibility for entering the information is given to a person in the unit being enumerated—usually the head of the household—although the questionnaire is usually distributed, collected and checked by a census official.

69. The decision regarding the method of enumeration to be employed, that is, whether it is to be primarily the canvasser or the householder method or a combination of both, should be taken at an early stage. Even where one or the other method has been traditionally followed, it is well to reassess periodically the relative advantages of each method of enumeration in light of the current census needs and changing techniques. An early decision is required because the method of enumeration used affects the budget, the publicity plan, the training programme, the design of the questionnaire and, to some extent, the kind of data which can be collected.

### (2) *Period of enumeration*

70. In the interest of simultaneity and to avoid double counting or omissions, it is important to keep the period of enumeration as brief as possible, consonant with careful work and budgetary and staff resources.

### (3) *Supervision*

71. Adequate supervision of the enumeration is essential. Where the enumeration extends over more than a few days, periodic assessment of the quantity and quality of the work accomplished facilitates the correction of inefficiencies and the maintenance of satisfactory progress during the enumeration period.

### (4) *Use of sampling in the enumeration*

72. Sampling may be employed in the enumeration for collecting information on any topics which need not be tabulated for small areas. Questions designed to apply only to a sample of the population may be included on the regular questionnaire or a special sample questionnaire may be used in addition to a complete enumeration questionnaire. For further discussions of the use of sampling in the enumeration, see paragraphs 111-115.

## C. DATA PROCESSING

73. No matter how thorough and accurate the census enumeration is, the census tabulations will not be accurate and useful unless the raw data are properly processed.

### (1) *Method of processing*

74. The choice of an appropriate method of processing is determined by the circumstances of each

country. The recent rapid advances in electronic data-processing techniques have made this method attractive to many countries, in spite of the costs of purchasing or renting equipment, the problems of transportation and servicing and the difficulties of securing an adequately trained staff of operators.

75. In determining the type of processing to be employed, and the advisability of a new complete or partial machine installation, or of adding to existing equipment, consideration should be given to all the processing requirements of the programme of data collection, of which the population census is one part. Only on this basis can a reasonable decision be arrived at.

76. If a suitable machine installation within the country is not readily available to the census office, consideration should be given to the possibility of processing outside the country at a regional or other installation.

### (2) *Stages of processing*

77. The stages of processing and the order in which they come differ somewhat according to the processing method used but all methods have in common the necessity of providing for editing of the original information for missing and inconsistent data, transcribing the information from the questionnaire for mechanical or electronic processing and tabulation of the results.

### (3) *Processing control*

78. Regardless of the processing method used, careful planning and control are required to ensure an uninterrupted flow of work through the various stages from receipt of the census questionnaires through the preparation of the final tabulations.

79. In considering methods of maintaining processing accuracy, account should be taken of the possibility of building tests of internal consistency into the processing scheme and of utilizing quality control methods. (For a discussion of the latter technique, see paragraphs 127-131.)

### (4) *Advance and final tabulations*

80. Because of the urgent need for information on some census topics and the length of time required for final tabulation of census results, consideration should be given to the preparation of advance tabulations of selected topics. These are usually based on a small sample of the raw data and may be issued as provisional results (see paragraphs 132-137).

81. Final tabulations may be based on all of the returns or on a sample (see paragraphs 138-139).

## D. EVALUATION OF THE RESULTS

82. Good census practice requires a careful consideration and evaluation of the completeness and accuracy of the census results. There may be errors in coverage and also in content, that is, mistakes in the reporting or recording of information concerning the characteristics of households or individuals.

83. The extent of one or the other kind of error can be estimated through the use of checks of the internal consistency of the data, by examination of the reasonableness of the results and by comparison of the results with data collected in other inquiries. A post-

enumeration field check is an essential part of the process of evaluation (see paragraphs 116-126).

84. The publication of census results should include an estimate of coverage error, i.e., the amounts of over- and under-enumeration, together with a full indication of the methods used for evaluating the completeness of the data. Similarly, it is desirable to provide, so far as possible, an evaluation of the quality of the information on each topic and of the effects of the editing procedures adopted.

85. One of the important effects may result from the correction of inconsistent data and the addition of data which are missing from the questionnaire but about which reasonable assumptions can be made. If information on sex is not recorded, for example, an allocation, based on other entries on the questionnaire, should be made. If age is not stated on the questionnaires for a small number of persons, randomly selected ages, appropriate to the other characteristics of the individual, may be assigned. Similarly, an entry for marital status may be added in some cases, consistent with age and relationship to the head of the household. If any allocation is made, the topics affected, the method used and the number of cases should be clearly described in the census report.

86. The process of evaluation should not be permitted to delay the prompt publication of the principal results of the census (see paragraph 93). Evaluations of the completeness and accuracy of the data can be issued after the initial publication of the results.

#### E. ANALYSIS OF THE RESULTS

87. Analytical studies of the census results should be undertaken by, or under the direction of, the office responsible for the census. A permanent census office should be the repository of all census results; it would thus be equipped with the information needed for comparative studies which will indicate long-term trends in the phenomena investigated. It would be desirable to invite specialists in other government offices or experts outside of the Government to take part in drawing up and executing a programme of studies.

88. Aside from such studies, which are part of the over-all census programme, additional analyses by research organizations, universities or other experts on their own initiative should be encouraged.

#### F. DISSEMINATION OF THE RESULTS

89. A census is not complete until the information collected is made available to potential users in a form suited to their needs. It is important, therefore, that plans be made and sufficient funds allocated to ensure publication of the tabulations of widespread interest.

90. The final tabulations should be presented and explained in a way which will make them usable by as many persons as possible. The data must be set forth by appropriate geographic and administrative divisions and by important demographic variables; evaluations

of their accuracy and appraisals of their significance should be included in the census publications. A sufficient number of maps should be provided in the census publication to allow the identification of the geographic units for which statistics are presented.

91. Not all of the processed material need be published. Tabulations which are required by only a few users, such as certain government offices or specialized research organizations, can be supplied in unpublished form. Some data may not even be tabulated until they are required at a later date. It should be noted, however, that the recommended tabulations in part VI of this document are of such wide interest that their publication is considered essential for each country which has collected the relevant data.

92. Where it is possible under the census law, consideration might be given to producing transcriptions of the information from a representative sample of the census questionnaires, for the use of qualified agencies and research institutes engaged in special studies beyond the programme of the census organization. Care must be taken, of course, to ensure that the information does not include such details as name or local address, from which individuals could be identified.

93. Every effort should be made to publish the principal results (such as those on age, sex and geographic distribution of the population) as soon as possible after the date of the enumeration; otherwise, their usefulness and the extent of their interest to the public will be diminished.

94. Target dates for publication should be determined well in advance and processing and reproduction programmes should be planned accordingly. There are various methods of reproduction available which are rapid, economical and legible, and these should be investigated.

95. It is recommended that, in addition to publishing the tabular results, every country should provide a methodological and administrative report giving the information necessary for appraising and interpreting the results of each census. This report should include specimens of the questionnaires, instructions for the enumeration, information on the cost of the census and on the manner in which the census was planned, organized and conducted, the important methodological and other problems encountered at the various stages of the programme and points to be considered in future censuses.

#### G. SYSTEMATIC RECORDING OF CENSUS EXPERIENCE

96. The cumulative experience of past censuses in a country can be of great help in the preparation of a new census. Because of the lapse of time between censuses and the likelihood of changes in upper-echelon personnel even in a permanent census office, it is most useful to assemble complete records on the methodology of each census, an evaluation of the techniques employed and the costs. These records should be arranged in such a way that information on each aspect of the census operation can be found easily.

## Part III

### USE OF SAMPLING IN A POPULATION CENSUS

97. Sampling should have a role in population censuses both as an integral part of the planning, execution, analysis and evaluation of the census and through the use of the census as a sampling frame for subsequent sample inquiries.

98. The most significant aspects of the use of sampling in connexion with the census are set forth below in three sections: A. Features of acceptable sample operations; B. Sampling as an integral part of the census, and C. The census as a basis for subsequent sample inquiries.

#### A. FEATURES OF ACCEPTABLE SAMPLE OPERATIONS

##### (1) *Accuracy*

99. The use of sampling in a census involves an awareness of the precision desired in a sample estimate. The higher the precision, the larger and/or more complex the sample, and hence the more expensive. Distinction is to be made between precision of a sample estimate, as measured by the sampling error (which gives the difference between the estimates obtained from a sample and from a complete enumeration under the same general conditions of the inquiry) and accuracy, as measured by the difference between the true value (which is generally unknown) and that obtained from an inquiry, whether on a sample or a complete enumeration basis. For this reason, in the case of a sample inquiry, accuracy includes both sampling errors and non-sampling errors.

100. For the successful execution of a scientifically designed sampling plan, it is essential that strict selection procedures be followed. The procedures must be such that a known positive probability is assigned to every unit in the sampling population. These probabilities are needed for estimating population values and for calculating the measures of precision of these estimates. Good selection procedures require that deviations from prescribed standards or instructions be minimized.

101. Although estimated results based on samples are subject to sampling errors in addition to whatever errors may be present in data based on a complete operation, the smaller scale of a sample operation may make it possible to employ interviewers of higher calibre, to devise and pose questions of greater detail and to minimize response errors.

102. Consideration should be given to the use of parallel samples, that is, interpenetrating networks of samples,<sup>1</sup> to supply controls at the point of collection of the data and also estimates of the margin of uncertainty of the sample estimates.

##### (2) *Census resources*

103. Effective planning of sample operations consists in meeting the requirements of accuracy by making judicious use of whatever expert knowledge and equipment are available in a particular country. It is obvious that

<sup>1</sup> See *Recommendations for the Preparation of Sample Survey Reports* (provisional issue) (United Nations publication, Sales No.: 64.XVII.7), p. 9, item 18.

sample plans aimed at the same objective may vary from country to country, depending on the quality and quantity of census resources. In planning a sample operation as part of the census effort, it is important to hear in mind considerations of cost and of competent direction.

104. The question of cost in sampling is of crucial significance. Numerous factors govern the cost of a sample and it is essential that these be fully weighed before a decision is made to associate a sample plan with a complete count. One important factor, for instance, is the size and complexity of the sample, which in turn is governed by the objectives of the survey and the procedures which are regarded as most efficient. The cost of a sample operation can be substantially lower if only a few geographical and cross-classification details are required.

105. Sample operations should be conducted under the direction of a competent statistician who is conversant with both the theory of sampling and the practical difficulties of carrying out surveys. The advice of such a statistician is indispensable at all stages of the sample procedure, that is, from planning of the sample to estimation of population values.

#### B. SAMPLING AS AN INTEGRAL PART OF THE CENSUS

106. Depending on the types of problems to be tackled, a country may consider applying sampling methods in one or more of the following phases of a population census: (1) tests of census procedures, (2) enumeration of topics in addition to those for which universal coverage is required, (3) post-enumeration field checks, (4) quality control of data processing, (5) advance tabulation of selected topics and (6) final tabulation.

##### (1) *Tests of census procedures*

107. Planning the various phases of a census often involves choosing among several alternative procedures. Tests conducted on a sample basis provide the best means of determining which alternative to use. The results of such tests facilitate a more desirable allocation of available census resources than is possible otherwise, and thus assist any country to undertake a census programme adapted to its needs and capacities.

108. The nature and extent of census testing depend on the information which is available from previous censuses or elsewhere. Countries which expect to expand the scope of their censuses rather substantially in relation to their previous censuses may have to have quite extensive recourse to census tests. This may warrant a broad experimental approach to the entire census plan.

109. If no previous information is available concerning the variability of the important characteristics to be investigated by sampling in the census, a pilot survey can be used to obtain such an estimate. The precision of the results to be obtained by subsequent sampling procedures can then be calculated in advance and the probable limits of error of estimation can be stated for each figure to be estimated. This important feature of sampling makes it possible to design the sample in accordance

with the precision required for the uses that are to be made of the data, or with the precision possible within the range of permissible costs.

110. When carrying out census tests, random sampling need not always be employed. Non-random, or purposive, samples may be used where, for testing the effectiveness of a projected course of action, it is not necessary to base the final decision on any quantitative measures derived from data obtained by means of the test, and particularly where the biases introduced are not of very great significance for the problems investigated. The tests of many procedures require duplication of the coverage and procedures within a compact area. In such a case, it is seldom feasible to include a sufficient sample of such areas to obtain representative coverage. The results for the area or areas actually covered must be projected to the expected total on the basis of general knowledge of the representativeness of the areas. In such cases, purposive selection of one or a few areas is generally preferable to a random selection. Purposive samples are also particularly useful when it is necessary to test census questionnaires and methods in areas with particularly difficult conditions. On the other hand, when quantitative measures are needed for comparing efficiencies of different procedures (for instance, in examining the anticipated response errors arising from different systems of enumeration), random sampling must be used.

(2) *Enumeration of topics in addition to those for which universal coverage is required*

111. The rapidly growing needs in a number of countries for extensive and reliable demographic data have made sampling methods a very desirable adjunct of any complete census. Sampling is increasingly being used for broadening the scope of the census by asking a number of questions of only a sample of the population. Modern experience in the use of sampling techniques has confirmed that it is not necessary to gather all demographic information on a complete basis; the sampling approach makes it feasible to obtain required data of acceptable accuracy when factors of time and cost might make it impracticable, or other considerations make it unnecessary, to obtain the data on a complete count basis.

112. It is important to bear in mind, however, that national legal requirements may make it mandatory to collect certain information on a complete count basis. Legislation in many countries prescribes complete population enumerations at particular times, or makes certain political or administrative dispositions dependent on particular results from a complete enumeration. For example, the apportionment of seats in the legislature among the civil divisions of a country often depends on the number of persons actually enumerated in each division. The data needed for this and similar purposes cannot be collected by sampling.

113. Information that is collected for only a sample of the population may be obtained by one of two different methods. Either the same interviewers may ask the questions or specially trained interviewers may be engaged for enumerating the sample. The first method may be used where it is fairly simple to obtain the information by conventional enumeration techniques: the second method is used where ordinary enumeration methods are not expected to elicit accurate answers to the questions and where the sample size can be kept small. In general, the choice depends on the nature and manner of asking the questions, which in turn are determined by considerations of cost and accuracy and of the nature of the data to be collected. It depends also on the nature

of the staff available and on the facilities for training and supervision.

114. It is important to make certain that asking questions which are not asked of all persons does not give rise to legal, administrative and even political issues since census information is required under statute and usually under penalty.

115. The suitability of particular questions for a sample enumeration depends on the precision with which results are needed for small areas and population groups, and on the enumeration costs involved. Account has also to be taken of the desirability of having results of high precision on basic topics for areas of various sizes, since such results can serve as bench-marks for numerous subsequent inquiries.

(3) *Post-enumeration field checks*

116. As the scope of the modern census is ever-increasing with time, the problem of attaining census data of high quality is becoming both more important and more difficult. In the present state of census practice, no procedure is yet available which can keep the census enumeration entirely free from errors. It is extremely important, however, that departure from accuracy and completeness does not exceed reasonable limits.

117. Census enumeration extends to every census unit in the population and involves numerous questions; it cannot, therefore, be completely checked since, in that case, the cost of re-enumeration would be prohibitive and the burden of response imposed on the public excessive. An effective way of determining the types and magnitudes of errors in the census enumeration is the re-enumeration of samples of census units for certain questions as soon as possible after the census day.

118. Post-enumeration field checks serve two principal purposes. The one is to inform users of the data about the accuracy attached to census figures and the other is to aid census officials in the improvement of subsequent censuses. In so far as the checks serve the latter purpose, the task of testing for subsequent censuses is greatly eased.

119. As mentioned earlier (see paragraph 110), random sampling need be used only when quantitative measures are required for appraising the census data (for instance, in determining the amount of under- or over-enumeration) with the best possible precision. Non-random or purposive samples may be used where quantitative measures derived from the sample data are not of crucial importance for testing the effectiveness of a certain census procedure. However, in choosing between a random and a purposive sample, it is well to keep in view the requirements of future demographic inquiries, including the next census, since a random sample, although it may be more expensive from the immediate viewpoint, may well provide a scientific and continuing basis for planning future inquiries of a related nature.

120. Quality of census data may be adversely affected by content errors and by errors in coverage.

121. Content errors here involved are errors in respondents' answers, biases and errors on the part of the interviewer and biases and errors arising from imperfection in the design of the questionnaire. These content errors can be subjected to critical census tests preceding the actual census, but experience has shown that post-enumeration field checks are necessary to determine the nature and extent of such errors in the census enumeration.

122. Special precautions should generally be taken in order to avoid errors in the collection of information

from the sample selected for the post-enumeration field check. The check should be conducted as closely as possible to the date of the original census, so that the best enumerators from the census can be used for the re-enumeration. Other advantages of such timing are that (a) there will have been a minimal movement of population, (b) respondents will still have freshly in mind the information as of the date of the census and (c) the public will be prepared to co-operate with the new inquiry because they have not forgotten the publicity and other activities connected with the census. The best of the supervisors and enumerators from the regular census should be selected to serve on the post-enumeration field check; they should receive intensive training and should be remunerated on a basis allowing them ample time to obtain valid replies. When necessary, their work should be verified by cross-checks with other elements of information.

123. To accomplish its purpose, a true post-enumeration field check, particularly one instituted to check coverage errors, should meet three separate requirements, which are:

(a) It should constitute a separate count independent of the original enumeration;

(b) It should be representative of the whole country and of all population groups, and

(c) It should involve one-to-one matching and reconciliation of records.

124. The ultimate sampling units for re-enumeration should be clearly defined and should preferably be operationally convenient geographic areas, taken from a comprehensive frame consisting of enumeration districts, preferably the enumeration districts used in the original census.

125. Representativeness in respect of the whole geographic area and of all population groups calls for the post-enumeration field check to be carried out in a well-designed random cluster sample, large enough to give at least an evaluation of the enumeration in the country as a whole and in its major civil divisions, since determination of quantitative measures of under- and over-enumeration is one of the important objectives of the procedure.

126. The one-to-one matching of census schedules to post-enumeration field check schedules is the essence of the re-interview method of census evaluation. Name-to-name matching is not an easy task in any country, especially in cultures where names lack uniqueness. Even identification of the household may be difficult in those parts of the world where street names and house numbers are practically non-existent. Nevertheless, since the efficacy of the post-enumeration field check as a remedial measure in census-taking rests on the identification of errors and their correction, comparisons must be made on a one-to-one basis to the degree possible.

#### (4) *Quality control of data processing*

127. Sampling can be used effectively for measuring and controlling the quality of census-processing operations. These include the editing of questionnaires, their coding, the recording of data on punched cards (or tape production) and their verification, some computations (rates etc.) and the tabulation of figures. Even in a country of medium population size, these operations involve millions of questionnaires and a far greater number of columns of figures and of perforations.

128. Under appropriate conditions, sample inspections and, in particular, quality control techniques, make

it possible to control effectively and economically the quality of census data processing, and it is no longer necessary or expedient to locate and correct substantially all processing errors by carrying out each operation a second time by way of verification. This course results in a much lower census cost than if the control had been performed on a complete basis. Moreover, it is, in any case, not justified to increase the processing costs of a census beyond a certain point for improving the accuracy of census results since these will still be affected by defects in enumeration (e.g., incompleteness of enumeration, response errors etc.) and other errors independent of processing. When final tabulations are in view, attention has to be paid to the accuracy of figures in a series of detailed cross-tabulations, especially those concerning relatively small areas or small groups of individuals. This demands accuracy in small lots of data and imposes more stringent conditions in the application of statistical methods of quality control than if only larger areas or groups were to be considered.

129. For clerical processes, such as coding, key punching etc., primary controls should be on the work of individuals since the difference among individuals is a major component of variation in quality. The quality of work of an individual may vary significantly over time. Therefore, it is desirable to compute error rates frequently. In addition, each person should undergo a qualifying period at the beginning of the operation during which his work is verified intensively, in some cases at the 100 per cent level.

130. Every effort should be made to keep operational features as simple as possible. Work to be verified should be designated by one person in each work unit rather than by making each verifier responsible for the application of sampling instructions. In general, a systematic pattern of selection with random starts is preferable to a random one. Measures of quality must be adaptable to simple record-keeping systems.

131. An inspection level of  $x$  per cent does not automatically ensure a cost saving of  $100-x$  per cent. Cost estimates must take into account 100 per cent inspection during the training period, fixed costs of handling inspection lots, 100 per cent inspection of rejected lots, costs of designing and selecting the sample, and extra record keeping.

#### (5) *Advance tabulation of selected topics*

132. A complete national census is a huge undertaking. Unless sampling methods are introduced, several years may elapse beyond the date to which the census refers before some of the tabulations of the greatest economic and social interest are published. This lag may be expected in countries which are large and which do not take censuses regularly and frequently, and also in the economically less developed countries where little or no funds can be devoted to modern tabulation equipment. The danger is no less serious, however, in countries where modern tabulation equipment is available in large quantities, since most of the increased capacity of such equipment has to be utilized to meet the heavy additional demands made by the modern census in those countries.

133. It is natural, therefore, that advance, provisional tabulation should be the most frequent application of sampling to census work and perhaps the first one to be made in many countries. Although it is true that, in most countries, interviewers prepare summaries referring to the number of persons enumerated and some other basic facts at the time of enumeration, there is never-

theless a definite need for early tabulation of some of the results, such as the distribution of the population by age groups, by type of activity and by industry, which cannot be derived from interviewers' preliminary reports. The need for advance tabulation is evident even in a small country which takes censuses of population regularly. It should be mentioned at this point that advance sample tabulations can be used to the best advantage when they are obtained for fairly large areas and for the country as a whole.

134. If only a sample of returns is processed and used for tabulation, the advance estimates of the basic census results thus obtained would be of current validity. The population may be undergoing such rapid changes that the processing of an advance sample may present a more up-to-date picture than would a complete tabulation. An important consideration in selecting topics for the advance sample tabulation is their variability, since sampling errors may tend to obscure changes that have occurred.

135. Securing advance tabulations through sampling has certain disadvantages. The results tabulated for the sample units have to be integrated with those tabulated for the non-sample units to give the final results. These operations may increase the total tabulation time of the census and its cost beyond what they would be without the special tabulation of advance results. Precautions are necessary in order to minimize the delay that may be caused in the preparation of the final results. To that end, the census plan should carefully co-ordinate the special tabulation of advance results and the tabulation of final results. One solution is to use priority processing for the sample areas and to duplicate punch cards or summaries for them; the duplicates should be processed to give the sample results and all records should be processed to give the complete results.

136. If sampling has been used as an integral part of a complete enumeration to broaden the scope of the census, by obtaining supplementary information, the same sample of individuals, households or other units will also provide a sample for advance tabulations of the census proper. Such a sampling scheme, if it is devised efficiently, with a view to securing additional census information by small administrative units, may offer excellent opportunities of conveniently obtaining advance tabulations by the same administrative units.

137. Even when no sampling has been used in the actual enumeration, the sample design for advance tabulations may be comparatively simple because the complete census returns provide the sampling frame and the domain or domains of study. Advantage may also be taken of the efficiency of using small sample units (e.g., households or small areas) as the smallest units are actually the easiest to define in the census returns.

#### (6) *Final tabulation*

138. The principal limitations of completely tabulating all the information collected in a population census are time and money. Consequently, tabulation programmes frequently provide for the complete tabulation of those elements of demographic and economic information which are regarded as of sufficient importance for small administrative areas, while certain other characteristics are tabulated only on a sample basis. Sampling is thus used to extend the scope of census tabulations and for obtaining data for special demographic studies.

139. There are certain demographic characteristics about which information is needed only by large areas

and for the country as a whole. Sampling makes it possible to obtain detailed tabulations for large areas, with reasonably small sampling errors and at a much reduced cost and in shorter time than needed for tabulations on a complete basis. Even greater savings in cost and time than in the case of simple tabulations are achieved if cross-tabulations are prepared on a sample basis. However, it should be borne in mind that sample tabulations imply some reduction of geographical detail and of detailed cross-classifications. Moreover, it is possible that such cross-tabulations may result in a number of cells which include a small number of units and, therefore, have high sampling errors.

#### C. THE CENSUS AS A BASIS FOR SUBSEQUENT SAMPLE INQUIRIES

140. A sampling frame may be a list of small areas, structures, households, people or groups of households. The census can be such a frame; in fact, the census can be the only frame for subsequent sampling in the many countries which have neither good maps, village lists, a register of population nor a register of households. Before a sample selection is undertaken, it is necessary to ensure that the sampling frame is free from such defects as inaccuracy, incompleteness, duplication, inadequacy and obsolescence. Each of these five types of defects in a frame introduces defects of a different type in the sample procedure. Emphasis should be laid at this point on the importance of updating the frame to the date of the sample inquiry. Otherwise, the inquiry results would refer to the date at which the frame was last revised. It is desirable to investigate carefully those parts of a population census which are to be used as the sampling frame for a proposed sample survey, since some defects are not at all apparent until a detailed examination has been made. This objective may be accomplished by examining the relevant administrative machinery of the census and the way in which the census information is kept up to date; sometimes the investigation may even entail a certain amount of field work.

141. Although this remedy is appropriate when the frame in question is a population census already enumerated and processed, a much more effective approach towards avoiding the above-mentioned defects would be to give very careful consideration to the problem at the stage of planning the census. A census can serve as a reasonably acceptable frame if, in addition to careful planning, the various phases of the census are executed with proper care, and if the obstacles to successful execution are fully recognized.

142. Maps and prior census information concerning small areas are very important for devising a good sample plan. Maps are particularly valuable if they unambiguously indicate boundaries of very small areas and the number of households or the number of inhabitants living within the boundaries. This prior information need not necessarily be very accurate or up to date if it is used for grouping or stratification.

143. For many subsequent sample inquiries, the main census results may be available for use as supplementary information. The availability of individual records or punch cards, the dates on which have been checked, makes it possible to select sample units from those which show characteristics relevant to the sample inquiry. Stratification and ratio estimation can thus readily be used, whereas they are difficult or impossible to employ when sampling is used as an integral part of the census, such as in tabulating advance results.

## Part IV

### THE UNIT, PLACE AND TIME OF ENUMERATION

#### A. UNIT OF ENUMERATION<sup>1</sup>

144. Since individual enumeration is an essential feature of a population census (see paragraph 10) the primary unit of enumeration is the person. The household is the general framework within which individuals are identified and it is also an additional unit of enumeration in its own right. The household is common to the population census, the housing census and housing and household sample surveys: a list of households can also provide the sampling frame for subsequent sample surveys. The careful identification of the household as a preliminary step to the enumeration can facilitate the efficient collection of the data and the control of its completeness.

145. In countries in which it is traditional to count families, the family in the broad sense of the term may be adopted as an additional unit of enumeration; in the great majority of cases the composition of this unit will coincide with that of the household.

##### (1) Household

146. The concept of "household" is based on the arrangements made by persons, individually or in groups, for providing themselves with food or other essentials for living. A household may be either; (a) a one-person household, that is, a person who makes provision for his own food or other essentials for living without combining with any other person to form part of a multiperson household or (b) a multiperson household, that is, a group of two or more persons who make common provision for food or other essentials for living. The persons in the group may pool their incomes and have a common budget to a greater or less extent; they may be related or unrelated persons or a combination of both.

147. Households usually occupy the whole, part of or more than one housing unit<sup>2</sup> but they may also be found living in camps, in boarding houses or hotels or as administrative personnel in institutions or they may be homeless. Households consisting of extended families which make common provision for food or of potentially separate households with a common head, resulting from polygamous unions, may occupy more than one housing unit.

##### (2) Persons not living in households

148. Special provision must be made for the enumeration of persons who are not members of households. These include persons in military installations and in correctional and penal institutions, in the dormitories

<sup>1</sup> The recommendations in this section are concerned with the household as a unit of enumeration and a framework within which individuals are identified. The household, however, also constitutes a unit of analysis. Recommendations concerning the collection of additional information on household characteristics are, therefore, included in part V, together with the other recommendations concerning topics to be investigated.

<sup>2</sup> For the definition of a housing unit, see *Principles and Recommendations for the 1970 Housing Censuses* (United Nations publication, Sales No.: 67.XVII.4), para. 169.

of schools and universities, in hospitals, in religious institutions and so forth.

149. Persons living in hotels or boarding houses do not belong in this category but should be distinguished as members of one-person or multiperson households, on the basis of the arrangements which they make for providing themselves with the essentials for living. Personnel of institutions not living in dormitories or similar accommodations should be treated in the same way.

#### B. PLACE OF ENUMERATION

150. In a census, information about each person can be collected and entered on the census questionnaire either where he is found on the day of the census (see paragraph 265) or at his usual residence (see paragraph 258).

151. In compiling the census results by geographic areas, however, each person can be included in either (a) the household (and hence the geographic area) where he was found on the day of the census or (b) the household (and the geographic area) where he usually resides. This allocation is not necessarily dependent upon the place at which information was collected for the individual but it can be simplified by the proper choice of a place of enumeration.

152. If only a "present in-area" population distribution is wanted, it is logical to enumerate each person at the place where he is found at the time of the census. If only a distribution by usual residence is required, it is more satisfactory to collect the information about each person at his place of usual residence. It should be noted, however, that it is not always possible to collect information about each individual at his usual residence, as for example when an entire household is away from its usual residence at the time of the census. Some provision must therefore be made for collecting information about such persons at the place where they are found at the time of the census.

153. With the growing interest in information on households and families and on internal migration, it is becoming increasingly desirable to prepare tabulations on the basis of usual residence rather than on the basis of place where found, since the latter is often temporary and so is not useful for the investigation of the above-mentioned topics. Also, although it is comparatively simpler to enumerate each person where he is found on the day of the census and to use a present-in-area population distribution, a usual-residence distribution is likely to be more accurate than a present-in-area distribution, if the time required for enumeration is so long as to permit considerable movement of persons during the interval.

154. If it is desired also to obtain information on both the usually resident population and the present-in-area population, then either each person present in each household on the census day, or each person present and each usual resident temporarily absent, can be enumerated at the appropriate household. A clear distinction

must then be made on the questionnaire, as applicable, among (a) persons usually resident and present on the day of the census, (b) persons usually resident but temporarily absent on the day of the census and (c) persons not usually resident but temporarily present on the day of the census.

155. Depending on the categories of persons enumerated at any given place, information may then be collected on the usual residence (address) of those only temporarily present and on the place (address) at which each temporarily absent person can be found. This information can be used both for allocating persons to the household and geographic area with which they are to be counted, and for checking to be certain that no person is counted twice (i.e., at both his usual residence and the place where he was found). The procedures to be followed at the enumeration and through the subsequent allocation of persons must, however, be very carefully planned and strictly adhered to if the allocation is to be accurate.

#### C. ENUMERATION POINT OF TIME

156. One of the essential features of a population census (see paragraph 13) is that each person must be enumerated as nearly as possible in respect of the same well-defined point of time. Where there is a single census day, this is usually accomplished by fixing a census "moment" at midnight at the beginning of the census day. Each person alive up to the census moment is included on a census schedule and counted in the total population, even though the process of completing the schedule does not take place until after the census mo-

ment or even after the census day, and the person may have died in the interim. Infants born after the census moment are not to be entered on a schedule or included in the total population, even though they may be living when the other persons in their household are enumerated.

157. Where the amount of time required for enumeration is very long (exceeding one month) and the population is not likely to be able to supply information as of a single moment in the past, it may be necessary to employ different points of time in the enumeration, even to the extent of using the day of enumeration of each household. If such a procedure is followed, it should be clearly explained in the census report and the total duration of the enumeration should be stated. For ease of reference and for the computation of intercensal indices, it is useful to designate a single date in the enumeration period as the official "census date". This date could be, for example, the day by which half of the population had been enumerated.

#### D. TIME-REFERENCE PERIOD FOR DATA ON THE CHARACTERISTICS OF THE POPULATION

158. The data collected about the characteristics of the population should be pertinent to a well-defined reference period. The time-reference period need not, however, be identical for all of the data collected. For most of the data, it will be the census moment or the census day; in some instances, however, it may be a brief period just prior to the census, as in the case of economic characteristics (see paragraph 291), or a longer period of time, as is the case with fertility questions (see paragraphs 184 and 189).

## Part V

### TOPICS TO BE INVESTIGATED IN A POPULATION CENSUS

#### A. FACTORS DETERMINING THE SELECTION OF TOPICS

159. The topics to be covered on the questionnaire (that is, the subjects regarding which information is to be collected for each individual) should be determined upon balanced consideration of (a) the needs of the country (national as well as local) to be served by the census data; (b) achievement of the maximum degree of international comparability, both within regions and on a world-wide basis; (c) the probable willingness and ability of respondents to give adequate information on the topics, and (d) the total national resources available for enumeration, processing, tabulation and publication, which will determine the over-all feasible scope of the census.

##### (1) Priority of national needs

160. Prime importance should be given to the fact that population censuses should be designed to meet national needs. The first consideration is that the census should provide information on the topics of greatest value to the country, with questions framed in such a way as to elicit data of maximum use to that country. Experience has shown that national needs will be best served if the census includes topics generally recognized as of basic value and defined in accordance with international standards. Nevertheless, countries may find that it is not necessary or practicable to include certain of the recommended topics in their censuses. Their decisions would depend upon balanced appraisal of how urgently the data are needed and whether the information could be obtained equally well or better from other sources. It is also recognized that many countries will find it necessary to include in the census topics of national or local interest in addition to the topics included in the recommendations.

##### (2) Importance of international comparability

161. The desirability of achieving regional and world-wide comparability should be another major consideration in the selection and formulation of topics for the census schedule. National and international objectives are usually compatible, however, since international recommendations, being based on a broad study of country experience and practice, are recommendations of definitions and methods which have successfully met general national needs.

162. If the particular circumstances within a country require departures from international standards, every effort should be made to explain these departures in the census publications and to indicate how the national presentation can be adapted to the international standards.

##### (3) Suitability of topics

163. The topics investigated should be such that the respondents will be willing and able to provide adequate information on them. Thus, it may be necessary to avoid topics which are likely to arouse fear, local prejudice or superstition, and questions which are too complicated and difficult for the average respondent to answer easily.

The exact phrasing of each question that is needed in order to obtain the most reliable responses will of necessity depend on national circumstances.

##### (4) Resources available

164. The selection of topics should be carefully considered in relation to the total resources available for the census. An accurate and efficient collection of data for a limited number of topics, followed by prompt tabulation and publication is more useful than the collection of data for an over-ambitious list of topics which cannot be properly collected or tabulated.

#### B. LIST OF TOPICS

165. The topics of general national and international value listed in paragraph 175 are those in most universal use, which have emerged after decades of census experience as of greatest utility for both national and international purposes. The list includes "Recommended" and "Other useful" topics; the former are distinguished by asterisks (\*). Together, the "Recommended" and "Other useful" topics comprise all of those which have been recommended as "basic" in at least one of the regional programmes for the 1970 population censuses.<sup>1</sup>

166. The "Recommended" topics consist of (a) all those which are considered "basic" in all four of the regional programmes and should be investigated by all countries and (b) three additional topics, namely, "children living", "literacy" and "school attendance". The three latter topics (each of which is "basic" in at least two of the regional programmes) are considered to be of such world-wide importance at this time as to warrant their inclusion as first-priority topics in the 1970 population censuses of most countries.

167. Information on children living is of fundamental importance as a source, in combination with information on children born alive, of an indicator of mortality. In countries where death rates can be estimated from fully adequate vital registration statistics, it is of course not necessary to include the topic in the census for this purpose. Nevertheless, such countries may still find it useful to collect the information because of its value in the analysis of families by number of living issue.

168. Data on literacy and school attendance are of great importance in connexion with economic and social development and the programmes of the United Nations and the United Nations Educational, Scientific and Cultural Organization to further this development by eradication of illiteracy. The exclusion of these topics from the census is appropriate only in countries where it is known that only a negligible number of persons are illiterate and reliable school attendance figures are available from other sources.

169. The "Other useful" topics (each of which has been recommended for investigation in at least the regional programme) may be investigated in accordance

<sup>1</sup> For a tabular presentation of the topics recommended as basic in each regional programme, see the annex.

with regional needs. Even when they are of great interest to particular regions, they are usually not equal in importance to the "Recommended" topics. Their investigation should generally be considered only after it is determined that information on the "Recommended" topics will be made available.

170. Each topic on the list is considered to be suitable for developing and developed countries alike. Those which are likely to present difficulties in statistically less developed countries, and which require time-consuming questioning, can probably best be investigated for a sample of the population (see paragraphs 111-115).

171. For convenience, the topics are grouped under three main headings: "Geographic characteristics", "Personal and household characteristics" and "Economic characteristics". Within each of these headings, a further distinction is made between "topics which appear on the questionnaire" and "derived topics". The former are those for which data are collected by a specific question on the questionnaire. Although data for the "derived topics" also come from information on the questionnaire, they do not necessarily come from replies to a specific question. "Total population", for example, is derived

from a count of the persons entered on the questionnaires as found or resident in each geographic unit. Such "derived topics" may, perhaps, be more correctly considered as tabulation components, but they are listed as topics in order to emphasize the fact that the questionnaire must in some way yield this information.

172. Finally, each group of topics is arranged in an arbitrary sequence, based on the relationship among them. Their order does not, therefore, indicate priority or relative importance and it has only a tenuous connexion with the order in which the relevant questions might appear on the census questionnaire.

173. The paragraph numbers in parentheses after each topic refer to the paragraphs in section C in which the definition and specifications of the topic are presented. The arrangement in section C is entirely alphabetical.

174. Since the classification of each topic will vary according to the other variables in the tabulation and the geographic detail required, the categories are indicated in the relevant tabulations in part VI.

175. The following is the list of topics:

#### RECOMMENDED AND OTHER USEFUL TOPICS

<i>Topics which appear on the questionnaire</i>	<i>Geographic characteristics</i>	<i>Derived topics</i>
2 *Place where found at time of census (para. 265) and/or		*Total population (paras. 283-287)
1 *Place of usual residence (paras. 258-261)		*Locality (paras. 232-234)
3 *Place of birth (paras. 249-255)		*Urban and rural (paras. 298-299)
4 Duration of residence (paras. 200-202)		
5 Place of previous residence (paras. 256-257)		
7 Place of work (paras. 262-264)		
<i>Personal and household characteristics</i>		
17 *Sex (para. 276)		*Household composition (paras. 218-221)
18 *Age (paras. 176-178)		
14 *Relationship to head of household (paras. 269-270) Relationship to head of family (paras. 266-268)		Family composition (paras. 213-217)
19 *Marital status (paras. 238-244)		
29 Age at marriage (paras. 179-183)		
30 Duration of marriage (paras. 179-183)		
25 Marriage order (paras. 179-183)		
27 *Children born alive (paras. 184-188)		
28 *Children living (paras. 189-190)		
20 Citizenship (paras. 191-195)		
38 *Literacy (paras. 228-231)		
39 *School attendance (paras. 274-275)		
37 *Educational attainment (paras. 203-208)		
40 Educational qualifications (paras. 209-212)		
23 National and/or ethnic group (paras. 245-246)		
22 Language (paras. 224-227)		
21 Religion (paras. 271-273)		
<i>Economic characteristics</i>		
41 *Type of activity (paras. 288-297)		48 Socio-economic status (paras. 277-280)
42 *Occupation (paras. 247-248)		49 Dependency (paras. 196-199)
43 *Industry (paras. 222-223)		
44 *Status (as employer, employee etc.) (paras. 281-282)		
51 Main source of livelihood (paras. 235-237)		

\* Recommended topic.

C. DEFINITIONS AND SPECIFICATIONS OF TOPICS  
(IN ALPHABETICAL ORDER)

(1) *Age*

176. *Age* is the estimated or calculated interval of time between the date of birth and the date of the census, expressed in completed solar years. Every effort should be made to ascertain the precise age of each person, and particularly of children under fifteen years of age.

177. Information on age may be secured either by obtaining the year, month and day of birth or by asking directly for age at the last birthday. The first method usually yields more precise information but it is extremely difficult to use in enumerating illiterate persons and, in any case, it involves additional processing in converting the answers into completed years. The direct question on age at last birthday is more economical to process but may yield less precise results, since it more easily permits approximate replies. It is, however, the appropriate question to use when a considerable proportion of the population cannot give a precise birth date.

178. If the direct age question is used, difficulties may arise in the reporting or in the recording of the information for children under one year of age, which may be given erroneously as "one year of age" rather than "0" years of age". These difficulties may be mitigated by collecting information on the date of birth of all children reported as "one year of age", even though only the direct age question is used for the remainder of the population. Another possible approach is to obtain age in completed months for children under one year. This method, however, can give rise to another type of recording error, that is, the substitution by the enumerator of "years" for "months", so that, for example, a three-month-old child is entered on the questionnaire as being three years of age.

(2) *Age at marriage, duration of marriage,  
and marriage order*

179. *Age at marriage* is the age of the individual, in completed years, at the time when the marriage took place.

180. *Duration of marriage* is the interval between the date of marriage and the date of either the census or the dissolution of marriage prior to the census, expressed in completed years.

181. *Marriage order* is the numerical sequence of the marriage, i.e., first, second etc.

182. Information on age at marriage and duration of marriage may be secured either by asking directly for the age at marriage and the number of years of married life or by obtaining the date of marriage and (if relevant) of the dissolution of marriage and calculating age and duration at the processing stage. Information on marriage order must be obtained directly.

183. Data on these three topics are useful in connexion with information on the number of children born alive because they permit the relationship of fertility to marriages of a particular order, to the age at which marriage occurred and to its duration. Hence, the information need be collected only for ever-married women. Depending upon the type of analysis to be made, the inquiries may relate to any or all of the following: (a) present marriage of married persons, (b) last marriage of widowed and divorced persons, (c) first marriage of married persons or of ever-married persons or (d) all marriages of ever-married persons.

(3) *Children born alive*

184. Information on number of *children born alive* should include all children born alive during the lifetime of the woman concerned up to the census date (i.e., excluding foetal deaths). The number recorded should comprise all live-born children, whether legitimate or illegitimate, or whether born of the present or of prior marriages, and regardless of whether they are living or dead at the time of the census or where they may be living.

185. Data on the total number of live-born children should preferably be collected for all women fifteen years of age and over, regardless of marital status. If it is not feasible to obtain the information for single women, it should be collected at least for all women fifteen years of age and over who are married (including consensually married), widowed, separated or divorced. In either case, the group of women for whom the data have been collected should be clearly described in the census report so as to avoid ambiguity in the analysis of the results.

186. The collection of accurate data on the number of children born alive can be difficult because of the possibility that some of the replies will actually include foetal deaths, on the one hand, while, on the other, they may exclude children who died early in their infancy. It is therefore recommended that, in obtaining information on total fertility, a series of probing questions on fertility be asked covering, in addition to the number of children born alive, (a) total number of issue (including foetal deaths), (b) the number born dead and (c) the number still living. Any lack of consistency among the answers to these questions will indicate some error in the response, which can then be further probed.

187. The procedure recommended above is time-consuming and may not be advisable for a complete enumeration. It is recommended, therefore, that if it is considered that the additional questions would unduly extend the time required for enumeration, fertility data should be collected only for a sample of the female population.

188. The collection of information on current fertility (e.g., number of children born during the twelve months preceding the date of the inquiry) is not recommended for a census as a general rule. This topic is considered more suitable for a sample survey because of the additional problems posed by the time-reference period. If the data are urgently needed, however, because of a lack of adequate birth-registration statistics, and a separate sample survey dealing with the topic is not feasible, consideration might be given to the inclusion of the topic in the census on a sample basis. If the data on total fertility are secured for only a sample of women, the information on current fertility should be collected for the same sample.

(4) *Children living*

189. Information on number of *children living* should include all the children born to the woman concerned (whether they are legitimate or illegitimate, or whether born of the present or of prior marriages), who are still living at the census date, regardless of their age. The number recorded should comprise those children living with her and those living elsewhere, no matter where the latter may reside.

190. Data on the total number of living children should be collected for the same group of women for whom data on total number of live-born children are

secured. The group should, therefore, preferably consist of all women fifteen years of age and over, regardless of marital status. If it is not feasible to obtain the information for single women, it should be collected at least for all women fifteen years of age and over who are married (including consensually married), widowed, separated or divorced. If the information on live-born children is collected for only a sample of women, the data on children living should be obtained for the same sample.

#### (5) *Citizenship*

191. *Citizenship* is defined as the legal nationality of each person. A citizen is a legal national of the country of the census; an alien is a non-national of the country.

192. Data on citizenship should be collected so as to permit the classification of the population into (a) citizens, including all citizens by birth or naturalization whether by declaration, option, marriage or other means and (b) aliens. Information on the country of citizenship of aliens should also be collected.

193. Enumeration and processing instructions should indicate the disposition which should be made of stateless persons, persons with dual nationality, persons in process of naturalization and any other ambiguous citizenship groups. The treatment of these groups should be described in the census reports.

194. For countries where the population includes a significant proportion of naturalized citizens, additional information distinguishing citizens by birth and citizens by naturalization may be desirable. Additional questions on previous nationality or method of naturalization are useful if very detailed information on this subject is required.

195. The reliability of reported citizenship may be doubtful in the case of persons whose citizenship has recently changed as a result of territorial changes, or among the population of some newly independent countries where the concept of citizenship has only recently become important. As an aid to the analysis of the results, tabulations based on citizenship should be accompanied by notations indicative of the likelihood of these or similar causes of mis-statement.

#### (6) *Dependency*

196. A *dependant* is a person who relies on the support of another person or persons for his or her main source of livelihood. A *supporter* is a person in any of the first four groups of the classification by main source of livelihood (see paragraph 236) on whom one or more persons rely for their main source of livelihood.

197. Dependants are identified through the classification by main source of livelihood, in which all dependants are classified in category (e). If it is desired to identify presumed supporters of dependants within the same household or family nucleus, this may be accomplished at the data-processing stage on the basis of pre-set criteria. In order to identify the actual supporter of each dependant within the same household, however, a direct question must be asked. If the supporter lives in a different household from his dependant, additional questions will be required to identify him satisfactorily.

198. The collection of precise information on supporters is difficult to accomplish in a census and the assumptions that must be made if supporters are identified at the processing stage may be of a dubious nature. It is therefore recommended that the investigation of supporters

should not be undertaken by countries lacking adequate census experience.

199. This topic does not appear in the recommended tabulations in part VI, although the category of persons whose main source of livelihood is support by another person or persons appears in tabulation 33. It is useful primarily as an additional variable in tabulations of the population by household and economic characteristics and can therefore be introduced into a number of tabulations according to the needs of each country.

#### (7) *Duration of marriage* (see *Age at marriage*)

#### (8) *Duration of residence*

200. *Duration of residence* is the interval of time up to the date of the census, expressed in completed years, during which each person has lived in (a) the locality which is his usual residence (see paragraph 258) at the time of the census and (b) the major civil division in which that locality is located.

201. Information on duration of residence is only meaningful if it is cross-classified with usual residence at the time of the census. If, however, in the compilation of the population of geographic units, persons are allocated to the place where they were found at the time of the census rather than to their usual place of residence, information on duration of residence is irrelevant for those persons who were only visiting at, or transient in, the place at which they were enumerated. Such persons must, therefore, be identified on the questionnaire as non-residents, so that they will not erroneously be counted as recent migrants.

202. In collecting information on duration of residence, it should be made clear that the concern is with length of residence in the major civil division and the locality but not in the particular housing unit.

#### (9) *Educational attainment*

203. *Educational attainment* is the highest grade completed within the most advanced level attended in the educational system of the country where the education was received. For international purposes, a *grade* is a stage of instruction usually covered in the course of a school year.

204. Information on educational attainment should be collected for all persons at or beyond the usual age for entrance into school and should allow the following levels of education to be identified:<sup>2</sup>

(a) *Education preceding the first level* (e.g., nursery school, kindergarten, infant school), which provides education for children who are not old enough to enter a school at the first level;

(b) *Education at the first level* (e.g., elementary school, primary school), of which the main function is to provide instruction in the tools of learning;

(c) *Education at the second level* (e.g., middle school, secondary school, high school, vocational school, teacher-training school at this level), based upon at least four years previous instruction at the first level, and providing general or specialized instruction, or both;

(d) *Education at the third level* (e.g., university, teachers college, higher professional school), which requires, as a minimum condition of admission, the

<sup>2</sup> The definitions are those of the United Nations Educational, Scientific and Cultural Organization in *Recommendation Concerning the International Standardization of Educational Statistics, Adopted by the General Conference at its Tenth Session* (Paris, 3 December 1958).

successful completion of education at the second level or evidence of the attainment of an equivalent level of knowledge;

(e) *Special education*, covering all general or vocational education given to children who are physically handicapped, mentally handicapped, socially maladjusted or in other special categories. This education is ordinarily not classified by level or grade.

205. Subdivisions of the second and third levels by type of education is recommended for those countries where it is feasible. Within the second level, the subdivisions should be:

- (i) *General education*, which does not aim at preparing the pupils directly for a given trade or occupation;
- (ii) *Vocational education*, which aims at preparing the pupils directly for a trade or occupation other than teaching;
- (iii) *Teacher training*, which aims at preparing the pupils directly for teaching.

206. Within the third level, the subdivisions should be:

- (i) Education at universities and equivalent institutions leading to an academic degree;
- (ii) Teacher education at non-university institutions;
- (iii) Other education at non-university institutions.

207. Necessary deviations from the international definitions and classifications that result from particular characteristics of the national educational system should be explained in connexion with the tabulations. If, for national purposes, it is necessary to publish the results entirely in terms of the designations used for the schools within a country, it is recommended that, in order to facilitate international comparison, the published data be accompanied by a general description of the educational system of the country.

208. Countries in which the educational system is undergoing important structural changes at the time of the census or has recently been changed may find it more suitable to collect information on number of years of schooling completed, rather than on the level and grade of school completed, because the former information provides more comparable data for the entire population.

#### (10) *Educational qualifications*

209. *Educational qualifications* are the qualifications (i.e., degrees, diplomas, certificates etc.) which an individual has acquired, whether by full-time study, part time study or private study; whether conferred in his home country or abroad; and whether conferred by educational authorities, special examining bodies or professional bodies. The acquisition of an educational qualification, therefore, implies the successful completion of a course of study.

210. Information on qualifications received should be collected primarily for persons having completed a course of study at the third level of education. Such information should include the title of the highest degree, diploma or certificate received, with an indication of the field of study if the title does not make this clear.

211. Because of the diversity in degrees and the like among different countries, it has so far not been possible to recommend a single classification of qualifications for world-wide use. If, however, an international classification is adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO), it

should be used by each country investigating the topic. In order to facilitate international comparison of the data, the national classification of fields of study should not be too detailed. The following rough arrangement of these fields into nine categories, suggested by UNESCO,<sup>3</sup> is presented as an aid to countries in establishing their classification. For each category, examples are given of the disciplines that it may embrace:

(a) *Humanities* (e.g., archaeology, history, languages, letters, library sciences, philosophy, psychology, theology and similar subjects);

(b) *Education* (e.g., education, pedagogy, physical education);

(c) *Fine arts* (e.g., architecture, drawing, music, painting, sculpture, speech and dramatic arts and similar subjects);

(d) *Law*;

(e) *Social sciences* (e.g., banking, commerce, diplomacy, economics, ethnology, geography, home economics, international relations, journalism, political science, public administration, social welfare, sociology, statistics and similar subjects);

(f) *Natural sciences* (e.g., astronomy, bacteriology, biochemistry, biology, chemistry, entomology, geology, geophysics, mathematics, meteorology, mineralogy, physics, zoology and similar subjects);

(g) *Engineering* (e.g., applied science, construction, geodesy, metallurgy, mining, surveying technology, textiles and similar subjects);

(h) *Medical science* (e.g., anatomy, dentistry, medicine, midwifery, nursing, optometry, osteopathy, pharmacy, physiotherapy, public health and similar subjects);

(i) *Agriculture* (e.g., agronomy, dairying, fisheries, forestry, horticulture, rural science, veterinary medicine and similar subjects).

212. In connexion with the tabulation of the data, each country should explain the significance of qualifications which might not be readily apparent to the users of the data and should also explain the treatment of persons qualified at the same rank in more than one field.

#### (11) *Family composition*

213. The family is defined as those members of the household (see paragraphs 146-147) who are related, to a specified degree, through blood, adoption or marriage. The degree of relationship used in determining the limits of the family is dependent upon the uses to which the data are to be put and so cannot be precisely set for world-wide use.

214. A family cannot comprise more than one household; a household can, however, consist of more than one family, of one family together with one or more non-related persons, or entirely of non-related persons. In practice, most households are composed of a single family consisting of a married couple without children or of one or both parents and their unmarried children. It should not be assumed, however, that this identity exists; census tabulations should, therefore, clearly indicate whether they relate to households or to families.

215. For the analysis of household composition, as stated in paragraph 218, consideration should be given to restricting the family to a married couple or parents and their never-married children in the same household,

<sup>3</sup> United Nations Educational, Scientific and Cultural Organization, *Manual of Educational Statistics*, first edition (Paris, 1961), p. 158.

i.e., to the *conjugal family nucleus*. A conjugal family nucleus,<sup>4</sup> consists of the following combinations: (a) a married couple without children, (b) a married couple with one or more never-married children or (c) one parent (either father or mother) with one or more never-married children. Couples living in consensual unions should be regarded as married couples.

216. It is obvious that the family nucleus, although it includes the most likely family compositions, does not take account of other relatives who may compose families of a different structure, such as unmarried brothers or sisters living together without their parents, or an aunt living with an unmarried niece. It also excludes a related person living with a family nucleus as defined above, as, for example, a widowed parent living with her married son and his family. It does not, therefore, provide information on all families. Countries may, therefore, wish to extend the definition of families in accordance with their own interests.

217. The family and the family nucleus are usually identified at the processing stage on the basis of name and relationship to the head of the household. If, however, it is desired to identify heads of families, it may be preferable to collect the information by means of direct questions at the enumeration, rather than upon the basis of a set of predetermined assumptions.

#### (12) Household composition

218. *Household composition* is a derived topic for which the information comes from the answers to the question on relationship to the head of the household. The composition of the private household can be examined from different points of view, but for census purposes it is recommended that the primary aspect that should be considered is the number of family nuclei (as defined in paragraph 215) of which the private household is composed.

219. Although the family and the family nucleus are usually also identified from the answers to the question on relationship to the head of the household, household and family are separate unique entities which are not interchangeable (see paragraph 214).

220. As set forth in paragraph 146, a *household* may be either (a) a one-person household, that is, a person who makes provision for his own food or other essentials for living without combining with any other person to form part of a multiperson household or (b) a multiperson household, that is, a group of two or more persons who make common provision for food or other essentials for living. The persons in the group may pool their incomes and have a common budget to a greater or less extent; they may be related or unrelated persons or a combination of both.

221. Since the smallest family nucleus must contain at least two related persons, the analysis of household composition according to the number of family nuclei need be undertaken only for multiperson households. In accordance with the definition of a family nucleus set forth in paragraph 215, a household which consists of a man and wife, their two never-married children and a married daughter and her husband would be considered to be composed of two family nuclei.

#### (13) Industry

222. *Industry* refers to the activity of the establishment in which an economically active person worked

<sup>4</sup> The term "family nucleus" as used in the remainder of this document is to be taken as "conjugal family nucleus".

during the time-reference period established for data on economic characteristics (see paragraph 291) or last worked, if unemployed. For purposes of international comparability, it is recommended that countries compile their data in accordance with the 1968 revision of the *International Standard Industrial Classification of all Economic Activities* (ISIC).<sup>5</sup> If this is not possible, provision should be made for the categories of the classification employed to be convertible to the 1968 revision of the ISIC or at least to the major (three-digit) groups of this classification. If the national data are not classified in accordance with the 1968 revision of the ISIC, an explanation of the differences should be given.\*

223. If data on secondary occupation are collected (see paragraph 248), information on industry in regard to the secondary occupation may also be collected.

#### (14) Language

224. There are three types of language data which can be collected in censuses. These are:

(a) *Mother tongue*, defined as the language usually spoken in the individual's home in his early childhood;

(b) *Usual language*, defined as the language currently spoken, or most often spoken, by the individual in his present home;

(c) Ability to speak one or more *designated languages*.

225. Each of these types of information serves a distinctly different analytical purpose. Each country should decide which, if any, of these types of information is applicable to its own needs. International comparability of tabulations is not a major factor in determining the form of the data to be collected on this topic.

226. In compilation of data on usual language or on mother tongue, it is desirable to show each language that is numerically important in the country and not merely the dominant language.

227. Information on language should be collected for all persons. In the tabulated results for children under five years of age, the criterion for determining language for children not yet able to speak should be clearly indicated.

#### (15) Literacy

228. *Literacy* is defined as the ability both to read and to write. Data on literacy should be collected so as to distinguish between persons who are literate and those who are illiterate. A person is *literate* who can, with understanding, both read and write a short, simple statement on his everyday life. A person is *illiterate* who cannot, with understanding, both read and write a short, simple statement on his everyday life.<sup>3</sup> Hence, a person capable of reading and writing only figures and his own name should be considered illiterate, as should a person who can read but not write and one who can read and write only a ritual phrase which has been memorized.

229. The language or languages in which a person can read and write is not a factor in determining literacy

\* The 1968 revision of the ISIC was not available at the time of the previous (photo-offset) edition of these recommendations. Since it is now available, paragraph 222 has been revised to take into account specifically the 1968 revision, in place of the reference in the earlier issue to the ISIC "most recently approved by the United Nations". The paragraph now also takes into account the fact that the major groups of the 1968 ISIC utilize a three-digit code rather than the two-digit code previously utilized.

<sup>5</sup> United Nations publication, Sales No.: E.68.XVII.8.

and need not ordinarily be considered on the questionnaire. In multilingual countries, however, this information may be essential for the determination of educational policy and would, therefore, be a useful additional subject of inquiry.

230. Data on literacy should be collected for all persons ten years of age and over. In order to permit international comparisons of data on adult literacy, however, any tabulations of literacy not cross-classified by detailed age should at least distinguish between persons under fifteen years of age and those fifteen years of age and over.

231. Because of the possible reluctance of at least some illiterate persons to admit to this fact and the difficulties of applying a test of literacy during a census investigation, the data collected may not be highly accurate. If it is considered likely that this deficiency is significant, the possibility should be stated in the census publications. If a literacy test has been applied, it should be described in detail.

#### (16) *Locality*

232. For census purposes, a *locality* should be defined as a distinct population cluster (also designated as inhabited place, populated centre, settlement etc.) of which the inhabitants live in neighbouring buildings and which has a name or a locally recognized status. It thus includes fishing hamlets, mining camps, ranches, farms, market towns, villages, towns, cities and many other population clusters which meet the criteria specified above. Any departure from this definition should be explained in the census report as an aid to the interpretation of the data.

233. Localities as defined above should not be confused with the smallest civil divisions of a country. In some cases, the two may coincide. In others, however, even the smallest civil division may contain two or more localities. On the other hand, some large cities or towns may contain two or more civil divisions, which should be considered only segments of a single locality rather than separate localities.

234. A large locality of a country (i.e., a city or a town) is often part of an *urban agglomeration*, which comprises the city or town proper and also the suburban fringe or thickly settled territory lying outside of, but adjacent to, its boundaries. The urban agglomeration is, therefore, not identical with the locality but is an additional geographic unit which includes more than one locality.

#### (17) *Main source of livelihood*

235. The *main source of livelihood* is the principal source from which each person has derived his economic sustenance for a substantial period of time (e.g., six months or longer) immediately preceding the date of the census.

236. The data should be collected so as to permit a classification of the population into persons whose main source of income is:

(a) *Economic activity* (wages, salaries, fees, commissions, pay in kind, subsistence production, sickness and maternity compensation and other income derived from economic activity);

(b) *Pensions of all kinds* paid by the State, other public bodies, co-operative organizations, enterprises or institutions (old-age pensions, superannuation pensions, survivors' pensions, disability and invalidity pensions, veterans' pensions etc.);

(c) *Benefits and assistance (other than pensions)* provided by the State, other public bodies, co-operative organizations, enterprises or institutions (scholarships, unemployment benefits and relief, family allowances, aid provided to inmates of mental or other hospitals or of institutions for the care of the aged, the needy, the infirm or orphans etc.);

(d) *Property or other investments* (rents, interest, dividends, royalties, e.g., from land or mineral rights, life insurance benefits etc.);

(e) *Support by another person or persons.*

237. The main source of livelihood should be investigated for both economically active persons and those who are not economically active. Some economically active persons (such as many married women) may actually be dependent on other persons for their main source of livelihood; others may receive their principal income from financial investments. On the other hand, some persons who are not economically active may have a substantial private income although a great many will be dependent on another person, on the State or on a private institution.

#### (18) *Marital status*

238. *Marital status* is the personal status of each individual in relation to the marriage laws or customs of the country. The categories of marital status to be identified are at least: (a) single, i.e., never-married, (b) married, (c) widowed and not remarried, (d) divorced and not remarried and (e) married but legally separated.

239. In some countries it will be necessary to take into account customary unions (which are legal and binding under customary law) and extra-legal unions, the latter often known as *de facto* (consensual) unions. Some countries will also wish to distinguish between married persons living with their spouses and those living apart from their spouses.

240. The treatment of persons whose only or latest marriage has been annulled is dependent upon the relative size of this group in the country. Where the group is substantial in size, it should comprise an additional category; if its size is insignificant, the individuals should be classified according to their marital status before the annulled marriage took place.

241. Some countries have experienced difficulties with distinguishing (a) between formal marriages and *de facto* unions, (b) between persons legally separated and those formally married but *de facto* separated and even (c) between persons legally separated and those legally divorced. If any of these circumstances necessitate a departure from the recommended classification of marital status, the composition of each category shown in the tabulations should be clearly stated.

242. If it is desired to have complete information on marital status, then this information should be collected and tabulated for persons of all ages, irrespective of the national minimum legal age, or the customary age, for marriage because the population may include persons who have been married in other countries with different minimum marriage ages; in most countries, also, there are likely to be persons who have been permitted to marry below the legal minimum age because of special circumstances. In order to permit international comparisons of data on marital status, however, any tabulations of marital status not cross-classified by detailed age should at least distinguish between persons

under fifteen years of age and those fifteen years of age and over.

243. The collection of additional information related to customs in particular countries (such as concubinage, polygamous or polyandrous marital status, inherited widows etc.) may be useful to meet national needs. For example, some countries may wish to collect data on the number of spouses of each married person. Modifications of the tabulations to take account of such information should be made within the framework of the basic classification in order to maintain international comparability in so far as possible.

244. The marital status categories described in this section do not provide complete information on the range of *de facto* unions of varying degrees of stability, which may be common in some countries; nor do they adequately describe the prevalence of formal marriage combined with relatively stable *de facto* union outside of the marriage. Information on these relationships is very useful in studies of fertility but it is not possible to provide an international recommendation on this matter because of the different circumstances prevailing among countries. It is suggested, however, that countries that wish to investigate these relationships should consider the possibility of collecting separate data for each person on formal marital unions, on *de facto* unions and on the duration of each type of union.

#### (19) *Marriage order (see Age at marriage)*

#### (20) *National and/or ethnic group*

245. The *national and/or ethnic groups* of the population about which information is needed in different countries are dependent upon national circumstances. Some of the bases on which ethnic groups are identified are: ethnic nationality (i.e., country or area of origin as distinct from citizenship or country of legal nationality), race, colour, language, religion, customs of dress or eating, tribe or various combinations of these characteristics. In addition, some of the terms used, such as "race", "origin" or "tribe", have a number of different connotations. The definitions and criteria applied by each country investigating ethnic characteristics of the population must, therefore, be determined by the groups that it desires to identify. By the nature of the subject, these groups will vary widely from country to country, so that no internationally accepted criteria can be recommended.

246. Because of the interpretative difficulties that may occur, it is important that, where such an investigation is undertaken, the basic criteria used should be clearly explained in the census report so that the meaning of the classification will be readily apparent.

#### (21) *Occupation*

247. *Occupation* refers to the kind of work done during the time-reference period established for data on economic characteristics (see paragraph 291) by the person employed (or performed previously by the unemployed), irrespective of the industry or the status (as employer, employee etc.) in which the person should be classified. For purposes of international comparisons, it is recommended that countries compile their data in accordance with the *International Standard Classification of Occupations, 1966* (ISCO, 1966) <sup>6</sup> issued by the

<sup>6</sup> International Labour Organisation, *International Standard Classification of Occupations, Revised Edition*, Geneva, 1968.

International Labour Office. If this is not possible, provision should be made for the categories of the classification employed to be convertible to the ISCO, 1966 or at least to the minor (two-digit) groups of this classification. If national data are not classified in conformity with the ISCO, 1966 an explanation of the differences should be given. \*

248. If it is thought that many persons in a country have more than one occupation during the time-reference period, information on the secondary occupation may also be collected.

#### (22) *Place of birth*

249. *Place of birth* is defined as the country or specified type of geographic unit of the country in which the person was actually born. In some countries, place of birth is reported as the area in which the mother of the individual resided at the time of the person's birth. Each country should specify which definition it has used.

250. The collection of information distinguishing between persons born in the country where the census is taken (natives), and those born elsewhere (foreign born), is necessary where any inquiry on place of birth is made. Even countries where the proportion of foreign-born population is insignificant and which, therefore, desire to compile information only on the place of birth of the native population must first separate the native from the foreign-born population. It is therefore recommended that place of birth be asked of all persons. For respondents who cannot name their country of birth, at least the continent should be ascertained. Although enumeration is somewhat simpler if the question is only in terms of native or foreign birth, collecting information on country of birth ensures more accurate returns with only slight additional processing costs.

251. For purposes of international comparability, as well as for internal use, it is preferable that information on place of birth be available according to national boundaries existing at the time of the census. To ensure such comparability, however, it may be necessary to obtain information not only on country of birth but also on major territorial division or even specific locality, so that reported place of birth can be correctly allocated to countries according to present boundaries. The necessity of such detailed reporting should be carefully weighed considering (a) the probable number of foreign-born persons from countries which have lost or gained territory and (b) the cost of coding a large number of specific foreign locations.

252. Information on place of birth of the native population is usually used primarily for the investigation of internal migration. For those countries that have been recently formed of parts of previously separate entities, however, it may be of use in assessing the relative size of the population segments from each of the previous entities, and their distribution throughout the country.

253. For the latter purpose, it is usually sufficient to collect information only on the major civil division (state, province, department etc.) in which the place of birth is located. If desired, more detailed information on the subdivision or specific locality can be collected and used for accurate coding of the major division or for presenting data for smaller areas.

\* The ISCO, 1966 was not available at the time of the previous (photo-offset) edition of these recommendations. Since it is now available, paragraph 247 has been revised to take into account specifically the ISCO, 1966, in place of the reference in the earlier issue to the "latest edition" of the ISCO.

254. For studies of internal migration, data on place of birth of the native population, particularly in terms of major civil divisions, are not adequate. In order to provide at least some measure of net internal migration into large cities by the use of data on place of birth within the country, it would be necessary to collect information for persons resident in each city, distinguishing those who were born in that city, those born elsewhere in the same major civil division and those born in another major civil division. Similar information for persons in each intermediate or minor civil division could be obtained by extending the question on place of birth within the country so that data would be collected on intermediate or minor, as well as major, civil divisions. It should be borne in mind, however, that the people of many developing countries, where internal migration poses many serious problems, may not be able to provide the details which would warrant the attempt to collect this type of information. Even in the statistically advanced countries, confusion is bound to arise from boundaries of minor civil divisions having been changed and from the possible tendency of persons born near a large city to give that city as their birth-place.

255. It is recommended, therefore, that for the study of internal migration, the data on place of birth be supplemented by the collection of information on duration of residence (see paragraphs 200-202) and/or on place of previous residence (see paragraphs 256-257).

#### (23) *Place of previous residence*

256. *Place of previous residence* is the major or other civil division in which the individual resided immediately prior to migrating into his present civil division of usual residence. Where reliable data can be collected, some countries will find it useful to ask for residence at a specified time in the past.

257. Information on place of previous residence is only meaningful if it is cross-classified with usual residence at the time of the census. If, however, in the compilation of the population of geographic units, persons are allocated to the place where they were found at the time of the census, rather than to their usual place of residence, information on place of previous residence is irrelevant for those persons who were only visiting at, or transient in, the civil division at which they were enumerated. Such persons must, therefore, be identified on the questionnaire as visitors or transients, so that they will not erroneously be counted as migrants.

#### (24) *Place of usual residence*<sup>7</sup>

258. *Place of usual residence* is the geographic place where the enumerated person usually resides. This may be the same as, or different from, the place where he was found at the time of the census or his legal residence.

259. Although most persons will have no difficulty in stating their place of usual residence, some confusion is bound to arise in a number of special cases, where persons may appear to have more than one usual residence. These cases might include persons who maintain two or more residences, students living at a school away from their parental home, members of the armed forces living at a military installation but still maintaining private living quarters away from the installation

and persons who sleep away from their homes during the working week but return home for several days at the end of each week. The treatment of all such cases should be clearly set forth in the census instructions.

260. Problems may also arise with persons who have been at the place where they are enumerated for some time but do not consider themselves to be residents of this place because they intend to return to their previous residence at some future time, and also with persons who have left the country temporarily but are expected to return after some time. In such instances, clearly stated time-limits of presence in, or absence from, a particular place must be set, in accordance with the prevailing circumstances in the country, to determine whether or not the person is usually resident there.

261. Information on place of usual residence should be collected in enough detail to enable tabulations to be made for the smallest geographic subdivisions required by the tabulation plan. To satisfy the requirements of the geographic classifications recommended in the tabulations in part VI, information is needed for minor civil divisions and for localities.

#### (25) *Place of work*

262. *Place of work* is the geographic location (e.g., the minor civil division, the locality or the section of the locality) in which employed persons (see paragraph 293) perform their occupation. Provision should also be made for classifying persons who have no fixed place of work.

263. Information on place of work is not of international significance. The choice of the type of civil or geographic division to be specified in collecting the information on this topic is, therefore, entirely dependent upon national needs. In making this choice, it may be useful to consider if data are required on travel within and/or between civil or geographic divisions. National needs will also determine if the information is to be collected throughout the country or only in those sub-national areas which have a heavy concentration of population.

264. Because the nature of the data secured will of necessity vary greatly among countries, the structure of the tabulations of the data and the classifications used will also vary. It is not possible, therefore, to recommend a uniform tabulation and this topic does not appear in the recommended tabulations in part VI.

#### (26) *Place where found at time of census*<sup>7</sup>

265. *Place where found at time of census* is the geographic place at which each individual was on the day of the census, whether or not this was his usual place of residence. Information on the place where each person was found should be collected in enough detail to enable tabulations to be made for the smallest geographic subdivisions required by the tabulation plan. To satisfy the requirements of the geographic classifications recommended in the tabulations in part VI, information is needed for minor civil divisions and for localities.

#### (27) *Relationship to head of family*

266. The *head of the family* can be either (a) that person who is acknowledged as such by the other members of the census family or of the family nucleus (see paragraphs 213-215) or (b) the member of the family or of the family nucleus who meets specified requirements.

<sup>7</sup> For the relationship between place of usual residence, place where found at time of census and the place at which each person is enumerated, see part IV, section B.

254. For studies of internal migration, data on place of birth of the native population, particularly in terms of major civil divisions, are not adequate. In order to provide at least some measure of net internal migration into large cities by the use of data on place of birth within the country, it would be necessary to collect information for persons resident in each city, distinguishing those who were born in that city, those born elsewhere in the same major civil division and those born in another major civil division. Similar information for persons in each intermediate or minor civil division could be obtained by extending the question on place of birth within the country so that data would be collected on intermediate or minor, as well as major, civil divisions. It should be borne in mind, however, that the people of many developing countries, where internal migration poses many serious problems, may not be able to provide the details which would warrant the attempt to collect this type of information. Even in the statistically advanced countries, confusion is bound to arise from boundaries of minor civil divisions having been changed and from the possible tendency of persons born near a large city to give that city as their birth-place.

255. It is recommended, therefore, that for the study of internal migration, the data on place of birth be supplemented by the collection of information on duration of residence (see paragraphs 200-202) and/or on place of previous residence (see paragraphs 256-257).

#### (23) *Place of previous residence*

256. *Place of previous residence* is the major or other civil division in which the individual resided immediately prior to migrating into his present civil division of usual residence. Where reliable data can be collected, some countries will find it useful to ask for residence at a specified time in the past.

257. Information on place of previous residence is only meaningful if it is cross-classified with usual residence at the time of the census. If, however, in the compilation of the population of geographic units, persons are allocated to the place where they were found at the time of the census, rather than to their usual place of residence, information on place of previous residence is irrelevant for those persons who were only visiting at, or transient in, the civil division at which they were enumerated. Such persons must, therefore, be identified on the questionnaire as visitors or transients, so that they will not erroneously be counted as migrants.

#### (24) *Place of usual residence*<sup>7</sup>

258. *Place of usual residence* is the geographic place where the enumerated person usually resides. This may be the same as, or different from, the place where he was found at the time of the census or his legal residence.

259. Although most persons will have no difficulty in stating their place of usual residence, some confusion is bound to arise in a number of special cases, where persons may appear to have more than one usual residence. These cases might include persons who maintain two or more residences, students living at a school away from their parental home, members of the armed forces living at a military installation but still maintaining private living quarters away from the installation

and persons who sleep away from their homes during the working week but return home for several days at the end of each week. The treatment of all such cases should be clearly set forth in the census instructions.

260. Problems may also arise with persons who have been at the place where they are enumerated for some time but do not consider themselves to be residents of this place because they intend to return to their previous residence at some future time, and also with persons who have left the country temporarily but are expected to return after some time. In such instances, clearly stated time-limits of presence in, or absence from, a particular place must be set, in accordance with the prevailing circumstances in the country, to determine whether or not the person is usually resident there.

261. Information on place of usual residence should be collected in enough detail to enable tabulations to be made for the smallest geographic subdivisions required by the tabulation plan. To satisfy the requirements of the geographic classifications recommended in the tabulations in part VI, information is needed for minor civil divisions and for localities.

#### (25) *Place of work*

262. *Place of work* is the geographic location (e.g., the minor civil division, the locality or the section of the locality) in which employed persons (see paragraph 293) perform their occupation. Provision should also be made for classifying persons who have no fixed place of work.

263. Information on place of work is not of international significance. The choice of the type of civil or geographic division to be specified in collecting the information on this topic is, therefore, entirely dependent upon national needs. In making this choice, it may be useful to consider if data are required on travel within and/or between civil or geographic divisions. National needs will also determine if the information is to be collected throughout the country or only in those sub-national areas which have a heavy concentration of population.

264. Because the nature of the data secured will of necessity vary greatly among countries, the structure of the tabulations of the data and the classifications used will also vary. It is not possible, therefore, to recommend a uniform tabulation and this topic does not appear in the recommended tabulations in part VI.

#### (26) *Place where found at time of census*<sup>7</sup>

265. *Place where found at time of census* is the geographic place at which each individual was on the day of the census, whether or not this was his usual place of residence. Information on the place where each person was found should be collected in enough detail to enable tabulations to be made for the smallest geographic subdivisions required by the tabulation plan. To satisfy the requirements of the geographic classifications recommended in the tabulations in part VI, information is needed for minor civil divisions and for localities.

#### (27) *Relationship to head of family*

266. The *head of the family* can be either (a) that person who is acknowledged as such by the other members of the census family or of the family nucleus (see paragraphs 213-215) or (b) the member of the family or of the family nucleus who meets specified requirements.

<sup>7</sup> For the relationship between place of usual residence, place where found at time of census and the place at which each person is enumerated, see part IV, section B.

267. If the first definition is used, the head of the family must be identified by means of a direct question at the enumeration. If the second definition is employed, the head of the family can be identified at the processing stage on the basis of such characteristics as sex, age and marital status or simply by virtue of being the head of a one-family household.

268. In investigating the relationship of the members of the family to its head, the relationships to be distinguished will depend upon the definition of the family used for census purposes.

#### (28) *Relationship to head of household*

269. The *head of the household* is that person in the household who is acknowledged as such by the other household members. Although a more desirable definition for purposes of dependency statistics would be the person who bears the chief responsibility for the economic maintenance of the household, it is not recommended that this definition be applied because of the difficulty of collecting the information needed to determine economic responsibility.

270. In investigation the relationship of the members of the household to its head, a distinction should be made among: (a) head of household, (b) spouse of the head, (c) child of the head, (d) spouse of child of the head, (e) grandchild or great-grandchild of the head, (f) parent of the head or of the spouse of the head, (g) other relative of the head, (h) domestic servant and (i) other person not related to the head. Where this classification is considered too detailed for successful collection of the information, categories (f) and (h) may be eliminated; persons who would fall into either of these categories can then be identified, as appropriate, as "other relative of the head" or "other person not related to the head".

#### (29) *Religion*

271. For census purposes, *religion* may be defined as either (a) religious or spiritual belief or preference, regardless of whether or not this belief is represented by an organized group or (b) affiliation with an organized group having specific religious or spiritual tenets. Each country that investigates religion in its census should use the definition most appropriate to its needs and should set forth, in the census publication, the definition that has been used.

272. The amount of detail collected on this topic is also dependent upon the requirements of the country. It may, for example, be sufficient to inquire only about the religion of each person; on the other hand, respondents may be asked to specify, if relevant, the particular sect to which they adhere within a religion.

273. For the benefit of users of the data who may not be familiar with all of the religions or sects within the country, as well as for purposes of international comparability, the classifications of the data should show each sect as a subcategory of the religion of which it forms a part. A brief statement of the tenets of religions or sects that are not likely to be known beyond the country or region is also helpful.

#### (30) *School attendance*

274. *School attendance* is defined as attendance at any regular educational institution, public or private, for systematic instruction at any level of education during a

well-defined and recent time period.<sup>8</sup> Instruction in particular skills, which is not part of the recognized educational structure of the country (e.g., in-service training courses in factories), is not considered "school attendance" for this purpose.

275. Information on school attendance should be collected for all persons between the usual age for entrance into the first level of school and twenty-four years of age inclusive. If it is considered likely that a significant number of older persons are attending school, the information may also be collected for persons over twenty-four years of age.

#### (31) *Sex*

276. The *sex* (male or female) of every individual should be recorded on the census questionnaire (see paragraph 85).

#### (32) *Socio-economic status*

277. The purpose of a classification of the population by *socio-economic status* is to identify different population groups which are, on the one hand, reasonably homogeneous and, on the other hand, fairly clearly distinguished from other groups in respect of their situation and which can, therefore, be used to establish the relationship between the socio-economic position of individuals (or of households) and many demographic, social, economic and cultural phenomena.

278. Socio-economic status can be based entirely on the economic characteristics of an individual or can also take into account such other characteristics as income and education. It need not, therefore, require any additional questions on the census questionnaire beyond those used to gather information on the other topics mentioned.

279. Of the economic characteristics from which socio-economic status can be derived, namely, type of activity, industry, occupation and status (as employer, employee etc.), the two latter are probably most useful because they bring out socially significant distinctions.

280. An example of a socio-economic classification derived from economic characteristics is that recommended by the Conference of European Statisticians for the 1960 censuses of population.<sup>9</sup>

#### (33) *Status (as employer, employee etc.)*

281. *Status* (as employer, employee etc.) refers to the status of an economically active individual (see paragraph 292) with respect to his employment, that is, whether he is (or was, if unemployed) an employer, own-account worker, employee, unpaid family worker or a member of a producers' co-operative, as defined below.<sup>10</sup>

<sup>8</sup> See the definition of a pupil in United Nations Educational, Scientific and Cultural Organization, *Recommendation Concerning the International Standardization of Educational Statistics* (Paris, 1958), and the distinction therein between full-time and part-time school attendance.

<sup>9</sup> Conference of European Statisticians, Working Group on Censuses of Population and Housing, "European programme for national population censuses" (Conf.Eur.Stats/WG.6/81), paras. 69-72, and "Report of the fifth session" (Conf.Eur.Stats/WG.6/97), paras. 89-95.

<sup>10</sup> The first four categories are those recommended by the United Nations Population Commission at its fifth session in 1950; the category "member of producers' co-operative" was adopted for the recommendations for the 1960 population censuses, endorsed by the Statistical Commission at its tenth session in 1958. The wording of the description of each category has been revised, as appropriate, to meet current needs.

(a) *Employer*: a person who operates his or her own economic enterprise or engages independently in a profession or trade, and hires one or more employees. Some countries may wish to distinguish among employers according to the number of persons they employ.

(b) *Own-account worker*: a person who operates his or her own economic enterprise or engages independently in a profession or trade, and hires no employees.

(c) *Employee*: a person who works for a public or private employer and receives remuneration in wages, salary, commission, tips, piece-rates or pay in kind.

(d) *Unpaid family worker*: a person who works a specified minimum amount of time (at least one third of normal working hours), without pay, in an economic enterprise operated by a related person living in the same household. If there are a significant number of unpaid family workers in enterprises of which the operators are members of a producers' co-operative who are classified in category (e), these unpaid family workers should be classified in a separate subgroup.

(e) *Member of producers' co-operative*: a person who is an active member of a producers' co-operative, regardless of the industry in which it is established. Where this group is not numerically important, it may be excluded from the classification and members of producers' co-operatives should be classified to other headings, as appropriate.

(f) *Persons not classifiable by status*: experienced workers with status unknown or inadequately described and unemployed persons not previously employed.

282. If data on secondary occupation are collected (see paragraph 248), information on status (as employer, employee etc.) in regard to the secondary occupation may also be collected.

#### (34) Total population

283. The inclusion or exclusion from the population total of a country of certain specific groups of persons depends on national circumstances and needs. No recommendation is, therefore, made as to the composition of total population but it is recommended that each country describe in detail the figure accepted officially as the total. It is not sufficient to state that the figure is a *de facto* or a *de jure* population because the meanings of the two terms are not sufficiently precise.

284. The description should clearly show the disposition of each of the groups listed below, that is, whether each was or was not counted in the total. The magnitude of each group should be given, together with an indication of whether the group was enumerated or if its size was estimated. If any group does not exist at all among the population, this fact should be stated and the magnitude of the group should be shown as "zero". This may occur particularly with groups (a), (b), (d) and (n).

285. The groups to be considered are:

- (a) Nomads;
- (b) Persons living in remote areas;
- (c) Military, naval and diplomatic personnel and their families located outside the country;
- (d) Merchant seamen and fishermen resident in the country but at sea at the time of the census (including

those who have no place of residence other than their quarters aboard ship);

(e) Civilian residents temporarily in another country as seasonal workers;

(f) Civilian residents who cross a frontier daily to work in another country;

(g) Civilian residents other than those in (c), (e) and (f) working in another country;

(h) Civilian residents other than those in (c)-(g) temporarily absent from the country;

(i) Foreign military, naval and diplomatic personnel and their families located in the country;

(j) Civilian aliens temporarily in the country as seasonal workers;

(k) Civilian aliens who cross a frontier daily to work in the country;

(l) Civilian aliens other than those in (i), (j) and (k) working in the country;

(m) Civilian aliens other than those in (i)-(l) temporarily in the country;

(n) Transients on ships in harbour at the time of the census.

286. In regard to groups (h) and (m), it is recommended that an indication be given of the criteria used in determining that presence in, or absence from, the country is temporary.

287. In those countries where the total population figure has been corrected for under- or over-enumeration, both the enumerated figure and the estimated corrected population figure should be shown and described. The detailed tabulations will of necessity be based on only the actual enumerated population.

#### (35) Type of activity

288. *Type of activity* is the relationship of each person to current economic activity. Information should be collected for each person at or above the minimum age for which economic characteristics are to be tabulated as to whether or not the person is economically active.

289. Particular attention should be given to groups that may be especially difficult to classify, such as female unpaid family workers in agriculture, young persons seeking work for the first time and persons receiving pensions consequent upon retirement from one job who are, at the same time, working at another job. Census publications should provide information on the rules which were applied in the classification of such groups.

290. The minimum age-limit adopted for the census questions on economic activity should be set in accordance with the conditions in each country, but never higher than fifteen years. Those countries that have a large proportion of their labour force engaged in agriculture, a type of activity in which, normally, many children participate, will need to select a lower minimum age than will highly industrialized countries, where employment of young children is rare. In order to permit international comparisons of data on the economically active population, however, any tabulations of economic characteristics not cross-classified by detailed age should at least distinguish between persons under fifteen years of age and those fifteen years of age and over.

291. The adoption of a specific time reference for census data on economic characteristics is fundamental to the concept of the economically active population. It

is recommended that the time-reference period should be not longer than one week.<sup>10</sup> Where it is considered that classification on the basis of current activity over this brief time period does not reflect year-round activities, particularly where there is a highly seasonal pattern of employment and regular periodic sample surveys are not held during the year, supplementary information on "usual" economic characteristics over a longer period may also be collected. Such supplementary information may also prove useful in enabling comparisons to be made between the results obtained when the brief time-reference period is used and when a longer period is employed, in order to ascertain the effect of different time references.

292. *Economically active population* comprises all persons of either sex who furnish the supply of labour for the production of economic goods and services during the time-reference period chosen for the investigation. It includes both persons in the civilian labour force and those serving in the armed forces. In compilations of the data, a separate category of "members of the armed forces" may be maintained, so that the category can be deducted from the total labour force whenever desirable. The civilian labour force comprises both persons employed and those unemployed during the time-reference period.<sup>11</sup> These two groups should be distinguished in accordance with the following criteria.

(a) *Employed*

293. The *employed* comprise all persons, including family workers, who worked during the time-reference period established for data on economic characteristics (see paragraph 291) or who had a job in which they had already worked but from which they were temporarily absent because of illness or injury, industrial dispute, vacation or other leave of absence, absence without leave or temporary disorganization of work due to such reasons as bad weather or mechanical breakdown.<sup>10</sup>

(b) *Unemployed*

294. The *unemployed* consist of all persons who, during the reference period, were not working but who were seeking work for pay or profit, including those who never worked before. Also included are persons who, during the reference period, were not seeking work because of temporary illness, because they made arrangements to start a new job subsequent to the reference period or because they were on temporary or indefinite lay-off without pay.<sup>10</sup> Where employment opportunities are very limited, the unemployed should also include persons who were not working and were available for work, but were not actively seeking it because they believed that no jobs were open. The recorded data on

<sup>11</sup> See International Labour Organisation, *The International Standardization of Labour Statistics* (Geneva, 1959), pp. 44-45.

the unemployed should distinguish persons who never worked before.

295. In classifying the population by type of economic activity, participation in an economic activity should always take precedence over a non-economic activity; hence, employed and unemployed persons should not be included in the not economically active population, even though they may also be, for example, students or home-makers.

296. *Not economically active population* comprises the following functional categories:

(a) *Home-makers*: persons of either sex, not economically active, who are engaged in household duties in their own home; for example, housewives and other relatives responsible for the care of the home and children. (Domestic servants working for pay, however, are classified as economically active.)

(b) *Students*: persons of either sex, not economically active, who attend any regular educational institution, public or private, for systematic instruction at any level of education;

(c) *Income recipients*: persons of either sex, not economically active, who receive income from property or other investment, royalties or pensions from former activities;

(d) *Others*: persons of either sex, not economically active, who are receiving public aid or private support, and all other persons not falling into any of the above categories, such as children not attending school.

297. Since some individuals may be classifiable in more than one category of the not economically active population (e.g., a person may be a student and a home-maker at the same time), the enumeration instructions should indicate the order of preference for recording persons in one or another of the categories. Consideration might also be given to presenting the categories on the census questionnaire in the preferred order because persons tend to answer with the first category that applies to them.

(36) *Urban and rural*

298. Because of national differences in the characteristics that distinguish urban from rural areas, the distinction between urban and rural population is not yet amenable to a single definition which would be applicable to all countries. For this reason, each country should decide for itself which areas are urban and which are rural.

299. For national purposes as well as for international comparability, the most appropriate unit of classification is the locality, as defined in paragraph 232, or, if this is not possible, the smallest administrative division of the country. If regional recommendations on the definition of urban and rural are available at the time of the census, their specifications should be followed.

## Part VI

### TABULATIONS TO BE PREPARED IN A POPULATION CENSUS

#### A. SCOPE AND OBJECTIVE OF TABULATIONS

300. As countries have turned to national planning as a means of promoting and guiding economic and social development, the need for factual information on which to base the necessary programmes has become universally recognized. Resources are scarce, however, and statistical inquiries costly. It has therefore become increasingly necessary to weigh each tabulation proposed for inclusion in the census in terms of its ultimate cost and its utility for planning purposes, and to restrict the number of topics to a bare but significant minimum for greater economy and efficiency. In preparing these recommendations, the first consideration, therefore, has been the selection of tabulations that would yield the data required most urgently for development programmes.

301. The census tabulations outlined in this part include "Recommended" tabulations and "Other useful" tabulations. They employ the topics shown in paragraph 175.

302. The "Recommended" tabulations employ the "Recommended" topics only and are divided into two orders of priority. The first-priority tabulations are considered to be of widest importance and each should be prepared by all countries which have investigated the topics made use of therein. The second-priority tabulations, while also of generally recognized value, serve somewhat more specialized purposes than those of first priority, or involve somewhat more elaborate compilation procedures. Second-priority tabulations should be undertaken only if it is certain that this will not interfere with the preparation of all of the relevant first-priority tabulations.

303. The "Other useful" tabulations employ the "Other useful" topics in combination with "Recommended" topics. These are considered to be the most important tabulations of the "Other useful" topics and are presented for the guidance of countries which investigate these topics.

304. Accompanying each tabulation is a statement of the principal uses of the data supplied by it,<sup>1</sup> and an illustrative sketch outline of the tabulation, showing one way of providing for the required attribute classifications. It should be emphasized that these sketches are illustrative only; they are in no sense recommended formats for the tabulation because these will depend on many other factors.

305. The tabulations set forth constitute a modest programme; many other worth-while and practicable tabulations can be included in the census programme of any country with sufficient resources to undertake a more ambitious tabulation scheme. Such other tabulations could further utilize information on the

"Recommended" or "Other useful" topics or could introduce information on additional topics of significance in the country concerned.

306. The feasibility of preparing more detailed or additional tabulations will depend to a considerable extent on the method of data processing utilized. The application of electronic data processing makes possible the more rapid preparation of tabulations and the inclusion of a greater amount of detail within each tabulation than can be accomplished by the older methods of processing.

307. The tabulations herein recommended are appropriate as final tabulations. The extent to which advance provisional tabulations of the same subject-matter are prepared depends on the rapidity with which the processing can be accomplished and the urgency of the need for the data (see paragraphs 80 and 132-137).

308. The specifications for each tabulation include, *inter alia*, a geographic classification. This is intended to be a guide to the types of civil divisions of each country for which the information provided by the tabulation is generally needed; appropriate urban and rural classification is also indicated.

309. Countries will undoubtedly also wish to prepare at least some of the tabulations for additional areas, such as civil divisions smaller than are indicated, or economic regions. Another type of area for which tabulation is useful is the small subdivisions of principal localities known as "census tracts" (in English) which some countries have delineated for purposes of analysis of the census results. The areas for which it is feasible to show information will be affected by whether sampling was used either in the collection of the information or in the tabulation stage.

310. Tabulations for the subnational areas specified may be prepared on the basis of the resident population of each area (see paragraph 258) or on the basis of the population found in each area at the time of the census (see paragraph 265). Tabulations relating to the resident population are generally more useful since they are appropriate to the apportionment of representation in legislative bodies, the measurement of internal migration, the computation of vital statistics rates by place of residence and the planning and administration of such services as schools and housing, which have relevance only to the resident population. Tabulations on the basis of the population found in the area at the time of the census are useful where this population is considerably larger than the resident population, thus raising the demand for products and services above the level which would be required by the resident population alone.

311. The tabulations described below are in no sense presented as models of completed tables. The purpose here is to present a view of the subject-matter elements desired as the end-products. In the presentation of results, various elements may be combined as parts of a single table according to the needs of each country,

<sup>1</sup> Much of the descriptions of the uses of the data has been drawn from *National Programmes of Analysis of Population Census Data as an Aid to Planning and Policy-Making* (United Nations publication, Sales No.: 64.XIII.4).

so long as the indicated categories and cross-classifications are made available.

## B. LIST OF TABULATIONS

312. The following list gives the title of each tabulation in order to facilitate a summary appraisal of the scope of the programme. The detailed specifications for each tabulation are given immediately following the list.

### TITLE

#### *Recommended tabulations*

(An asterisk (\*) preceding the number of the tabulation indicates that it is of first priority; tabulations not so marked are of second priority.)

#### *Tabulation number*

- \* 1. Total population and population of major and minor civil divisions, by urban/rural residence and sex
- \* 2. Population in localities by size-class of locality and sex
- \* 3. Population of principal localities and of their urban agglomerations, by sex
- \* 4. Households, population in households and number of family nuclei, by size of household, and number of persons not living in households
- 5. Population in households by relationship to head of household, marital status and sex
- \* 6. Population by single years of age and sex
- \* 7. Population by five-year age groups and sex
- \* 8. Population by marital status, age and sex
- \* 9. Native and foreign-born population by age and sex
- \*10. Foreign-born population by country of birth, age and sex
- 11. Native population by major civil division of birth, age and sex
- \*12. Population . . . years of age and over by type of activity, age and sex
- 13. Population not economically active, by functional categories, age and sex
- \*14. Economically active population by industry, age and sex
- \*15. Economically active population by occupation, age and sex
- \*16. Economically active population by status, age and sex
- \*17. Economically active population by status, industry and sex
- \*18. Economically active population by status, occupation and sex
- 19. Economically active population by industry, occupation and sex
- 20. Economically active population by occupation, marital status, age and sex

#### *Tabulation number*

- \*21. Female population . . . years of age and over by type of activity, marital status and age
- \*22. Population 10 years of age and over by literacy, age and sex
- \*23. Population 25 years of age and over by educational attainment, age and sex
- \*24. Population . . . to 24 years of age by school attendance, educational attainment, age and sex
- \*25. Population . . . to 24 years of age by school attendance, single years of age and sex
- 26. Economically active population by occupation, educational attainment, age and sex
- \*27. Female population 15 years of age and over by age and number of children born alive
- \*28. Female population 15 years of age and over by age and number of children living
- 29. Female population 15 years of age and over by age, number of children born alive and educational attainment

#### *Other useful tabulations*

- 30. Population by duration of residence in locality and major civil division, age and sex
- 31. Population by place of usual residence, place of previous residence and sex
- 32. Population by country of citizenship, age and sex
- 33. Population by main source of livelihood, age and sex
- 34. Population by socio-economic status, age and sex
- 35. Population which has successfully completed a course of study at the third level of education by educational qualifications, age and sex
- 36. Population by national and/or ethnic group, age and sex
- 37. Population by religion, age and sex
- 38. Population by language (mother tongue, usual language, or ability to speak one or more languages), age and sex
- 39. Female population 15 years of age and over, in first marriage, by age at marriage, duration of marriage and number of children born alive

## C. SPECIFICATIONS FOR EACH TABULATION

313. Each of the tabulations listed above is described in the following paragraphs. The population to be included, the geographic classification and the attribute classifications are specified in each case. The paragraph reference numbers following each attribute classification correspond to the paragraphs in parts IV and V where the respective topics are discussed. Under "Use of the tabulation", the principal uses of the data supplied by the tabulation are set forth. This is followed by an illustrative sketch outline of the tabulation.

(1) TOTAL POPULATION AND POPULATION OF MAJOR AND MINOR CIVIL DIVISIONS, BY URBAN/RURAL RESIDENCE AND SEX (Recommended, first priority)

*Population included:* total population.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division, (iii) each minor civil division. Distinguish urban and rural for (i), (ii) and (iii) (paras. 298-299).
- (b) *Sex* (para. 276): male, female.

*Use of the tabulation:*

The determination, by means of the census, of the total population and its distribution among major and minor territorial divisions is frequently a legal requirement, because the results are used to determine the apportionment of representation in legislative bodies and for many administrative purposes.

The data are also needed for studies of the internal distribution of population in relation to economic and social facilities and to studies of internal migration and other factors affecting the trends of population distribution. The results of such studies are relevant to policy with regard to the location of economic development projects and to the balance of economic and social development among different parts of the country. They also provide the base data for projections of the future regional and urban-rural distribution of the population, which may indicate the need for policy measures relevant to population redistribution.

In addition, the information is required for the computation of vital statistics rates on the subnational level and the study of urban-rural differentials in such rates. The results of such studies, together with studies of morbidity, are useful to policy regarding the location of health facilities. The vital statistics rates are used also in projections of the future population of civil divisions.

ILLUSTRATION 1. TOTAL POPULATION AND POPULATION OF MAJOR AND MINOR CIVIL DIVISIONS, BY URBAN/RURAL RESIDENCE AND SEX (Recommended, first priority)

<i>Geographic division and urban/rural residence</i>	<i>Both sexes</i>	<i>Sex</i>	
		<i>Male</i>	<i>Female</i>
TOTAL .....			
Urban .....			
Rural .....			
Major civil division A <sup>a</sup> .....			
Urban .....			
Rural .....			
Minor civil division a <sup>a</sup> .....			
Urban .....			
Rural .....			
Minor civil division b <sup>a</sup> .....			
Urban .....			
Rural .....			
(etc.) .....			
Major civil division B <sup>a</sup> .....			
Urban .....			
Rural .....			
Minor civil division a <sup>a</sup> .....			
Urban .....			
Rural .....			
Minor civil division b <sup>a</sup> .....			
Urban .....			
Rural .....			
(etc.) .....			
Major civil division Z <sup>a</sup> .....			
Urban .....			
Rural .....			
Minor civil division a <sup>a</sup> .....			
Urban .....			
Rural .....			
Minor civil division b <sup>a</sup> .....			
Urban .....			
Rural .....			
(etc.) .....			

<sup>a</sup> Name of major or minor division.

(2) POPULATION IN LOCALITIES BY SIZE-CLASS OF LOCALITY AND SEX (Recommended, first priority)

*Population included*: total population.

*Classifications*:

- (a) *Geographic division*: (i) total country, (ii) each major civil division.
- (b) *Size-class of locality* (paras. 232-234): 500,000 or more inhabitants; 100,000-499,999 inhabitants; 50,000-99,999 inhabitants; 20,000-49,999 inhabitants; 10,000-19,999 inhabitants; 5,000-9,999 inhabitants; 2,000-4,999 inhabitants; 1,000-1,999 inhabitants; 500-999 inhabitants; 200-499 inhabitants; less than 200 inhabitants; and, separately, the number of localities of each size-class.
- (c) *Population not in localities* (paras. 232-234); total number.
- (d) *Sex* (para. 276): male, female.

*Use of the tabulation*:

This tabulation provides information on national patterns of concentration or dispersion of population which will afford a reasonable degree of international comparability, provided that the unit of classification is the locality as defined in paragraph 232. Using data from successive censuses, it is possible to assess the rate of change, over given time periods, in the numbers of localities in each size-class and the proportion of the population in each size-class of locality. Projections of future patterns of population concentration, on the basis of past trends, are needed for determining policy in regard to the distribution of population.

In those countries where the distinction between urban and rural population can be based on locality size, these data provide the basis for the urban-rural classification and also for calculation of rates of urbanization.

The recommended classification of localities by size-class provides breaks in the size-class categories at 2,000, 10,000 and 20,000 inhabitants, which are used by some countries in distinguishing urban and rural localities.

ILLUSTRATION 2. POPULATION IN LOCALITIES BY SIZE-CLASS OF LOCALITY AND SEX

(Recommended, first priority)

<i>Geographic division<sup>a</sup> and size-class of locality</i>	<i>Number of localities</i>	<i>Both sexes</i>	<i>Sex</i>	
			<i>Male</i>	<i>Female</i>
TOTAL .....				
All localities .....				
500,000 or more inhabitants				
100,000-499,999 inhabitants				
50,000-99,999 inhabitants ..				
20,000-49,999 inhabitants ..				
10,000-19,999 inhabitants ..				
5,000-9,999 inhabitants ....				
2,000-4,999 inhabitants ....				
1,000-1,999 inhabitants ....				
500-999 inhabitants .....				
200-499 inhabitants .....				
Less than 200 inhabitants.				
Population not in localities...				

<sup>a</sup> (a) Total country, (b) each major civil division.

(3) POPULATION OF PRINCIPAL LOCALITIES AND OF THEIR URBAN AGGLOMERATIONS, BY SEX (Recommended, first priority)

*Population included:* population of localities above a specified size and of the urban agglomeration of each such locality.

*Classifications:*

- (a) *Geographic division:* total country.
- (b) *Principal localities and their urban agglomerations* (paras. 232-234): each specified city or town, the urban agglomeration of each specified city or town.
- (c) *Sex* (para. 276): male, female.

*Use of the tabulation:*

Information on the population size of the principal cities or towns and of the urban agglomerations of which these cities or towns are a part is needed for the

study of the growth of the largest clusters of population within a country. The results of such study are useful in planning the local services (such as utilities, roads, schools, hospitals etc.) which are required in proportion to population size.

The use of urban-agglomeration figures, in addition to those of the city proper, gives a more adequate indication of the size of the concentration of population, which often extends beyond the legal borders of the city. These figures may, in fact, reveal the need for redrawing of the city boundaries.

For the most effective use of the data, however, both the city-proper and the urban-agglomeration figures are needed because cities usually have some form of local government which does not extend over the surrounding densely settled fringe. Responsibility for policy determination and subsequent action may, therefore, have to be shared by several minor administrative divisions, each of which requires information about the population within its own borders.

ILLUSTRATION 3. POPULATION OF PRINCIPAL LOCALITIES AND OF THEIR URBAN AGGLOMERATIONS, BY SEX

(Recommended, first priority)

Locality	Both sexes		Sex			
			Male		Female	
	City proper	Urban agglomeration	City proper	Urban agglomeration	City proper	Urban agglomeration
City or town A <sup>a</sup> ....						
City or town B <sup>a</sup> ....						
City or town C <sup>a</sup> ....						
City or town D <sup>a</sup> ....						
.....						
.....						
City or town Z <sup>a</sup> ....						

<sup>a</sup> Name of city or town.

- (4) HOUSEHOLDS, POPULATION IN HOUSEHOLDS AND NUMBER OF FAMILY NUCLEI, BY SIZE OF HOUSEHOLD, AND NUMBER OF PERSONS NOT LIVING IN HOUSEHOLDS (Recommended, first priority)

*Population included:* total population.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division, (iii) each minor civil division, (iv) each principal locality. Distinguish urban and rural for (i), (ii) and (iii) (paras. 298-299).
- (b) *Size of household* (paras. 146-147): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 persons and over, not stated, and, separately, the aggregate number of households of each size.
- (c) *Number of family nuclei* (paras. 213-217): 0 (non-family household), 1, 2, 3, 4 and more, not stated, and, separately, the aggregate number of family nuclei.
- (d) *Persons not living in households* (paras. 148-149): total number.

*Use of the tabulation:*

The household is a basic socio-economic unit in all

countries and is often central to the study of social and economic development. Information on the number and size of households and changes in the rate of household formation is needed by the planners for, and suppliers of, many goods and services, for which the demand is related to households rather than to individuals. Agencies dealing with housing problems are in need of these data for the determination of current and projected rates of household formation, on the basis of which the number and size of new housing units required can be estimated.

The household is the basic unit in many sample surveys, for which this tabulation can provide the sampling frame and comparative data for estimating the accuracy of some of the survey results.

Information on household structure in terms of number of family nuclei in the household is needed for studies of household formation, projections of numbers of households and estimates of potential housing needs.

Information from a series of censuses is very useful for the study of the disintegration of the joint-family household of multigeneration-family household in countries where this pattern of living is changing.

ILLUSTRATION 4. HOUSEHOLDS, POPULATION IN HOUSEHOLDS AND NUMBER OF FAMILY NUCLEI, BY SIZE OF HOUSEHOLD, AND NUMBER OF PERSONS NOT LIVING IN HOUSEHOLDS

(Recommended, first priority)

Geographic division <sup>a</sup> and size of household	Total population	Number of households <sup>b</sup>	Households with indicated number of family nuclei <sup>b</sup>						Number of family nuclei <sup>b</sup>
			0	1	2	3	4 and more	Not stated	
TOTAL .....									
All households .....									
Households consisting of:									
1 person .....									
2 persons .....									
3 persons .....									
4 persons .....									
5 persons .....									
6 persons .....									
7 persons .....									
8 persons .....									
9 persons .....									
10 persons and over .....									
Not stated .....									
Persons not living in house- holds .....									
Not stated whether or not living in households .....									

<sup>a</sup> (a) Total country, (b) each major civil division, (c) each minor civil division, (d) each principal locality. Distinguish urban and rural for (a), (b) and (c).

<sup>b</sup> Not applicable to persons not living in households and those for whom it is not stated whether or not they are living in households.

(5) POPULATION IN HOUSEHOLDS BY RELATIONSHIP TO HEAD OF HOUSEHOLD, MARITAL STATUS AND SEX (Recommended, second priority)

Population included: all members of households.  
Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each minor civil division, (iv) each principal locality. Distinguish urban and rural for (i), (ii) and (iii) (paras. 298-299).
- (b) *Relationship to head of household* (paras. 269-270): head, spouse, child, spouse of child, grandchild or great-grandchild, parent or parent of spouse, other relative, servant, other person not related to the head, not stated.

(c) *Marital status* (paras. 238-244): single, married, widowed, divorced, separated, not stated.

(d) *Sex* (para. 276): male, female.

*Use of the tabulation:*

This tabulation provides material for the study of the distribution of individuals within households, which can serve to indicate the most typical relationships among members of households and also the proportion of persons living in households with an atypical relationship among their members. Comparison of these data with similar data from an earlier census can provide information on changing patterns of household composition and of characteristics of heads of households, which is useful in the preparation of projections of the number of households.

ILLUSTRATION 5. POPULATION IN HOUSEHOLDS BY RELATIONSHIP TO HEAD OF HOUSEHOLD, MARITAL STATUS AND SEX

(Recommended, second priority)

<i>Geographic division,<sup>a</sup> relationship to head of household and sex</i>	<i>Total popu- lation in households</i>	<i>Marital status</i>					
		<i>Single</i>	<i>Married</i>	<i>Widowed</i>	<i>Divorced</i>	<i>Separated</i>	<i>Not stated</i>
TOTAL .....							
Male .....							
Female .....							
Head .....							
Male .....							
Female .....							
Spouse .....							
Male .....							
Female .....							
Child .....							
Male .....							
Female .....							
Spouse of child .....							
Male .....							
Female .....							
Grandchild or great grand- child .....							
Male .....							
Female .....							
Parent or parent of spouse							
Male .....							
Female .....							
Other relative .....							
Male .....							
Female .....							
Servant .....							
Male .....							
Female .....							
Other person not related to the head .....							
Male .....							
Female .....							
Not stated .....							
Male .....							
Female .....							

<sup>a</sup> (a) Total country, (b) each major civil division, (c) each minor civil division, (d) each principal locality. Distinguish urban and rural for (a), (b) and (c).

(5) POPULATION IN HOUSEHOLDS BY RELATIONSHIP TO HEAD OF HOUSEHOLD, MARITAL STATUS AND SEX (Recommended, second priority)

Population included: all members of households.  
Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each minor civil division, (iv) each principal locality. Distinguish urban and rural for (i), (ii) and (iii) (paras. 298-299).
- (b) *Relationship to head of household* (paras. 269-270): head, spouse, child, spouse of child, grandchild or great-grandchild, parent or parent of spouse, other relative, servant, other person not related to the head, not stated.

(c) *Marital status* (paras. 238-244): single, married, widowed, divorced, separated, not stated.

(d) *Sex* (para. 276): male, female.

*Use of the tabulation:*

This tabulation provides material for the study of the distribution of individuals within households, which can serve to indicate the most typical relationships among members of households and also the proportion of persons living in households with an atypical relationship among their members. Comparison of these data with similar data from an earlier census can provide information on changing patterns of household composition and of characteristics of heads of households, which is useful in the preparation of projections of the number of households.

ILLUSTRATION 5. POPULATION IN HOUSEHOLDS BY RELATIONSHIP TO HEAD OF HOUSEHOLD, MARITAL STATUS AND SEX

(Recommended, second priority)

<i>Geographic division,<sup>a</sup> relationship to head of household and sex</i>	<i>Total popu- lation in households</i>	<i>Marital status</i>					
		<i>Single</i>	<i>Married</i>	<i>Widowed</i>	<i>Divorced</i>	<i>Separated</i>	<i>Not stated</i>
TOTAL .....							
Male .....							
Female .....							
Head .....							
Male .....							
Female .....							
Spouse .....							
Male .....							
Female .....							
Child .....							
Male .....							
Female .....							
Spouse of child .....							
Male .....							
Female .....							
Grandchild or great grand- child .....							
Male .....							
Female .....							
Parent or parent of spouse							
Male .....							
Female .....							
Other relative .....							
Male .....							
Female .....							
Servant .....							
Male .....							
Female .....							
Other person not related to the head .....							
Male .....							
Female .....							
Not stated .....							
Male .....							
Female .....							

<sup>a</sup> (a) Total country, (b) each major civil division, (c) each minor civil division, (d) each principal locality. Distinguish urban and rural for (a), (b) and (c).

(6) POPULATION BY SINGLE YEARS OF AGE AND SEX  
(Recommended, first priority)

*Population included:* total population.

*Classifications:*

- (a) *Geographic division:* total country. Distinguish urban and rural (paras. 298-299).
- (b) *Age* (paras. 176-178): under 1 year, 1, 2, 3, 4, 5, 6, 7 ... single years to 99, 100 and over, not stated.
- (c) *Sex* (para. 276): male, female.

*Use of the tabulation:*

Information on the detailed age and sex structure of the total, urban and rural population is needed for actuarial analysis of the probability of survival and of related life-table functions. It is also essential for the evaluation of the accuracy of census age data for the total, urban and rural population. From this tabulation, it is possible to reconstitute any selected age grouping (e.g., the school-age population, the population of voting age or groups used in the calculation of food requirements) without interpolating from 5-year age groups.

ILLUSTRATION 6. POPULATION BY SINGLE YEARS OF AGE AND SEX  
(Recommended, first priority)

<i>Geographic division<sup>a</sup> and age (in years)</i>	<i>Both sexes</i>	<i>Sex</i>	
		<i>Male</i>	<i>Female</i>
ALL AGES .....			
Under 1 .....			
1 .....			
2 .....			
3 .....			
4 .....			
5 .....			
6 .....			
7 .....			
.....			
.....			
.....			
.....			
99 .....			
100 and over .....			
Not stated .....			

<sup>a</sup> Total country. Distinguish urban and rural.

(7) POPULATION BY FIVE-YEAR AGE GROUPS AND SEX  
(Recommended, first priority)

Population included: total population.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each minor civil division, (iv) each principal locality. Distinguish urban and rural for (i), (ii) and (iii) (paras. 298-299).
- (b) *Age* (paras. 176-178): under 1 year, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85 and over, not stated.
- (c) *Sex* (para. 276): male, female.

*Use of the tabulation:*

Information from this tabulation is essential for many purposes, including the analysis of the factors of population change, the preparation of current population estimates and of projections, the calculation of age specific vital rates, analysis of the factors of labour supply and the study of problems of dependency. The grouped age classification is recommended because it is appropriate to cross-classification by other variables. This tabulation provides a convenient summary of the total, urban and rural population by the various geographic areas according to the age groups used in most of the other recommended tabulations. The tabulation should present "raw" rather than graduated data.

ILLUSTRATION 7. POPULATION BY FIVE-YEAR AGE GROUPS AND SEX  
(Recommended, first priority)

<i>Geographic division<sup>a</sup> and age (in years)</i>	<i>Both sexes</i>	<i>Sex</i>	
		<i>Male</i>	<i>Female</i>
ALL AGES .....			
Under 1 .....			
1-4 .....			
5-9 .....			
10-14 .....			
15-19 .....			
20-24 .....			
25-29 .....			
30-34 .....			
35-39 .....			
40-44 .....			
45-49 .....			
50-54 .....			
55-59 .....			
60-64 .....			
65-69 .....			
70-74 .....			
75-79 .....			
80-84 .....			
85 and over .....			
Not stated .....			

<sup>a</sup> (a) Total country, (b) each major civil division, (c) each minor civil division, (d) each principal locality. Distinguish urban and rural for (a), (b) and (c).

(8) POPULATION BY MARITAL STATUS, AGE AND SEX  
(Recommended, first priority)

Population included: total population.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each principal locality. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Marital status* (paras. 238-244): single, married, widowed, divorced, separated, not stated. Persons whose only, or latest, marriage has been annulled may be classified in a separate category or classified according to their marital status before the annulled marriage took place.
- (c) *Age* (paras. 176-178): under 15 years, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated.
- (d) *Sex* (para. 276): male, female.

Use of the tabulation:

This tabulation supplies material for the study of age at marriage, in the absence of marriage statistics,

and frequency of celibacy, widowhood and divorce and of the effect of these factors on population growth through their influence on fertility. A simple measure of this influence is the comparison of the ratio of children in the population to all women of child-bearing age and the ratio of children to those women who have ever been married. For this type of analysis, information on *de facto*, rather than legal, marital status is most useful.

Information on the legal marital status of the population as a whole and by sex and age groups is the basis for the computation of a number of crude and age-sex specific vital statistics rates, including legitimate and illegitimate birth-rates, marriage rates specific for previous marital status, divorce rates based on the married population and mortality rates specific for marital status. The data are also required for the preparation of nuptiality tables.

A refinement of this tabulation, showing heads of households by marital status, age and sex, can be used together with the present tabulation to obtain age-sex marital status-specific headship rates. Application of these rates to the projected population by age, sex and marital status provides projected numbers of households.

ILLUSTRATION 8. POPULATION BY MARITAL STATUS, AGE AND SEX  
(Recommended, first priority)

Geographic division, <sup>a</sup> sex and marital status	All ages	Age (in years)							
		Under 15	15-19	20-24	25-29	.....	70-74	75 and over	Not stated
<i>Both sexes</i>									
TOTAL .....									
Single .....									
Married .....									
Widowed .....									
Divorced .....									
Separated .....									
Not stated .....									
<i>Male</i>									
(as for <i>Both sexes</i> )									
<i>Female</i>									
(as for <i>Both sexes</i> )									

<sup>a</sup> (a) Total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b).

(9) NATIVE AND FOREIGN-BORN POPULATION BY AGE AND SEX (Recommended, first priority)

Population included: total population.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each principal locality. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Age* (paras. 176-178): under 1 year, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated.
- (c) *Sex* (para. 276): male, female.

Use of the tabulation:

These data are the basis for assessing the net contribution of immigration to the age and sex structure of the population. In countries where immigration has occurred on an important scale, it is highly valuable to tabulate the data on sex-age structure separately for the native and the foreign-born population. Thus the effects of immigration on the growth and structure of the population can be examined and estimates of future mortality and fertility can be improved by taking into account the nativity differentials. The provision of the category of infants under one year of age is useful for studying relative under-enumeration of foreign-born and native infants.

ILLUSTRATION 9. NATIVE AND FOREIGN-BORN POPULATION BY AGE AND SEX

(Recommended, first priority)

<i>Geographic division,<sup>a</sup> sex and age (in years)</i>	<i>Total</i>	<i>Native</i>	<i>Foreign-born</i>	<i>Not stated</i>
<i>Both sexes</i>				
ALL AGES .....				
Under 1 .....				
1-4 .....				
5-9 .....				
10-14 .....				
15-19 .....				
20-24 .....				
25-29 .....				
30-34 .....				
35-39 .....				
40-44 .....				
45-49 .....				
50-54 .....				
55-59 .....				
60-64 .....				
65-69 .....				
70-74 .....				
75 and over .....				
Not stated .....				
<i>Male</i>				
(as for <i>Both sexes</i> )				
<i>Female</i>				
(as for <i>Both sexes</i> )				

<sup>a</sup> (a) Total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b).

(10) FOREIGN-BORN POPULATION BY COUNTRY OF BIRTH, AGE AND SEX (Recommended, first priority)

(c) *Age* (paras. 176-178): under 1 year, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated.

(d) *Sex* (para. 276): male, female.

*Population included:* foreign-born population.

*Use of the tabulation:*

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division.
- (b) *Country of birth* (paras. 249-255): each continent, each country within continent which is the birthplace of a significant number of foreign-born persons, all other countries (combined) in each continent, continent not known.

Data on country of birth are useful in the identification of ethnic groups among immigrants although they do not in themselves give any indication of the degree of assimilation which may have taken place among these groups. They also provide the bases for estimating the volume of net migration from specified countries. The data also throw light on likely problems of cultural assimilation, which are related to the age, sex and country of birth of the immigrants.

ILLUSTRATION 10. FOREIGN-BORN POPULATION BY COUNTRY OF BIRTH, AGE AND SEX  
(Recommended, first priority)

Geographic division, <sup>a</sup> continent and country of birth, and sex	All ages	Age (in years)								
		Under 1	1-4	5-9	10-14	15-19	.....	70-74	75 and over	Not stated
<i>Both sexes</i>										
TOTAL .....										
Africa .....										
Country A <sup>b</sup> .....										
Country B <sup>b</sup> .....										
.....										
.....										
Country Z <sup>b</sup> .....										
All other countries										
Country not stated										
America, North .....										
(as above)										
America, South .....										
(as above)										
Asia .....										
(as above)										
Europe .....										
(as above)										
Oceania .....										
(as above)										
Continent not stated										
<i>Male</i>										
(as for <i>Both sexes</i> )										
<i>Female</i>										
(as for <i>Both sexes</i> )										

<sup>a</sup> (a) Total country, (b) each major civil division.

<sup>b</sup> Name of country.

(11) NATIVE POPULATION BY MAJOR CIVIL DIVISION OF BIRTH, AGE AND SEX (Recommended, second priority)

Population included: all persons born in the country.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Major civil division of birth* (paras. 249-255): each major civil division of the country, not stated.
- (c) *Age* (paras. 176-178): 0-4 years, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated.
- (d) *Sex* (para. 276): male, female.

Use of the tabulation:

This tabulation is useful for internal migration studies because it provides indications of the magnitude of migration into, and out of, each major part of the country as well as of the ultimate origins of the migrants. Because, however, it identifies only major territorial divisions and it does not show either duration of residence or prior place of residence, it fails to provide much of the detailed information on internal migration which countries need. Likewise, it does not supply information on migration to large cities, which is the most important kind of internal migration in many countries. Finally, it overlooks the fact that many foreign-born persons become internal migrants after their initial residence in the country. In spite of these important drawbacks, however, the data serve a useful purpose in countries where no other information on internal migration is available and their compilation is, accordingly, recommended for such countries.

ILLUSTRATION 11. NATIVE POPULATION BY MAJOR CIVIL DIVISION OF BIRTH, AGE AND SEX  
(Recommended, second priority)

Geographic division, <sup>a</sup> sex and major civil division of birth	All ages	Age (in years)								
		0-4	5-9	10-14	15-19	20-24	.....	70-74	75 and over	Not stated
TOTAL .....										
Major civil division A <sup>b</sup>										
Major civil division B <sup>b</sup>										
Major civil division C <sup>b</sup>										
.....										
Major civil division Z <sup>b</sup>										
<i>Male</i>										
(as for <i>Both sexes</i> )										
<i>Female</i>										
(as for <i>Both sexes</i> )										

<sup>a</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

<sup>b</sup> Name of major civil division.

(12) POPULATION . . . YEARS OF AGE AND OVER BY TYPE OF ACTIVITY, AGE AND SEX (Recommended, first priority)

*Population included:* population at or above the minimum age adopted for enumerating the economically active population.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division, (iii) each principal locality. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Type of activity* (paras. 288-297): economically active (of which, (i) employed, (ii) unemployed (distinguishing persons seeking work for the first time)), not economically active, not stated.
- (c) *Age* (paras. 176-178): under 15 years, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated. The category "under 15 years" should include all ages between the minimum age limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.
- (d) *Sex* (para. 276): male, female.

*Use of the tabulation:*

Studies of the growth, composition and distribution of manpower are of fundamental importance for the determination of policies and planning of programmes aimed at full and effective utilization of a nation's human resources. This tabulation provides the data needed for computing crude and age-specific participation rates, that is, the percentages of economically active persons among males and females of each age group, which are fundamental for studies of factors determining the size and composition of a nation's manpower and its relation to the size and structure of the population, and for making manpower projections.

Economic activity rates can also be used in conjunction with life-table functions to calculate the working life of males and females and rates of accession to, and retirement from, economic activity.

Information on the employed and the unemployed furnishes part of the data needed for the appraisal of manpower utilization, which can serve as a guide for short- and long-term policy planning. It can provide some of the benchmark data needed for more intensive and current studies of unemployment and under-employment, which can be effectuated through labour force sample surveys.

ILLUSTRATION 12. POPULATION . . . YEARS OF AGE AND OVER BY TYPE OF ACTIVITY, AGE AND SEX (Recommended, first priority)

<i>Geographic division,<sup>a</sup> sex and age (in years)</i>	<i>Total . . . years of age and over</i>	<i>Type of activity</i>				
		<i>Economically active</i>			<i>Not economically active</i>	<i>Not stated</i>
		<i>Employed</i>	<i>Unemployed</i>			
			<i>Total</i>	<i>Seeking work for the first time</i>		
<i>Both sexes</i>						
ALL AGES . . . . .						
Under 15 <sup>b</sup> . . . . .						
15-19 . . . . .						
20-24 . . . . .						
25-29 . . . . .						
30-34 . . . . .						
35-39 . . . . .						
40-44 . . . . .						
45-49 . . . . .						
50-54 . . . . .						
55-59 . . . . .						
60-64 . . . . .						
65-69 . . . . .						
70-74 . . . . .						
75 and over . . . . .						
Not stated . . . . .						
<i>Male</i>						
(as for <i>Both sexes</i> )						
<i>Female</i>						
(as for <i>Both sexes</i> )						

<sup>a</sup> (a) Total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b).

<sup>b</sup> All ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

(13) POPULATION NOT ECONOMICALLY ACTIVE, BY FUNCTIONAL CATEGORIES, AGE AND SEX (Recommended, second priority)

Population included: population not economically active.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division.
- (b) *Functional categories* (paras. 296-297): homemaker, student, income-recipient, other, not stated.
- (c) *Age* (paras. 176-178): under 15 years, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-

54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated. The category "under 15 years" should include all ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

- (d) *Sex* (para. 276): male, female.

Use of the tabulation:

This tabulation is of use in providing information for the analysis of potential sources of manpower which are not at present readily available but which may become so under different circumstances.

ILLUSTRATION 13. POPULATION NOT ECONOMICALLY ACTIVE, BY FUNCTIONAL CATEGORIES, AGE AND SEX

(Recommended, second priority)

<i>Geographic division,<sup>a</sup> sex and age (in years)</i>	<i>Total not economically active</i>	<i>Functional categories</i>				
		<i>Home-maker</i>	<i>Student</i>	<i>Income- recipient</i>	<i>Other</i>	<i>Not stated</i>
<i>Both sexes</i>						
ALL AGES .....						
Under 15 <sup>b</sup> .....						
15-19 .....						
20-24 .....						
25-29 .....						
30-34 .....						
35-39 .....						
40-44 .....						
45-49 .....						
50-54 .....						
55-59 .....						
60-64 .....						
65-69 .....						
70-74 .....						
75 and over .....						
Not stated .....						
<i>Male</i>						
(as for <i>Both sexes</i> )						
<i>Female</i>						
(as for <i>Both sexes</i> )						

<sup>a</sup> (a) Total country, (b) each major civil division.

<sup>b</sup> All ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

(14) ECONOMICALLY ACTIVE POPULATION BY INDUSTRY, AGE AND SEX (Recommended, first priority)

Population included: economically active population.

Classifications:

- (a) *Geographic division*: total country. Distinguish urban and rural (paras. 298-299).
- (b) *Industry* (paras. 222-223): according to, or convertible to, the 1968 revision of United Nations *International Standard Industrial Classification of All Economic Activities* (ISIC), at least to the major (three-digit) groups.\*

\* The 1968 revision of the ISIC was not available at the time of the previous (photo-offset) edition of these recommendations. Since it is now available, this paragraph has been revised to take into account specifically the 1968 ISIC, in place of the reference in the earlier issue to the "latest" revision of the ISIC. It also takes into account the fact that the major groups of the 1968 ISIC utilize a three-digit code rather than the two-digit code previously utilized.

- (c) *Age* (paras. 176-178): under 15 years, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated. The category "under 15 years" should include all ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

- (d) *Sex* (para. 276): male, female.

Use of the tabulation:

In addition to the picture they present of the age-sex distribution of the population in particular occupations and industries, tabulations 14 and 15 furnish material for analyses of rates of accession to, and withdrawal from, particular types of economic activities. These data make it possible to carry out co-ordinated studies of prospective trends in the number of workers attached to various occupations and industries, within the framework of projections of the total economically active population. The tabulations also provide the denominators for differential analysis of fertility and mortality according to occupation and industry.

ILLUSTRATION 14. ECONOMICALLY ACTIVE POPULATION BY INDUSTRY, AGE AND SEX <sup>a</sup>

(Recommended, first priority)

Geographic division, <sup>b</sup> sex and industry	All ages	Age (in years)							
		Under 15 <sup>c</sup>	15-19	20-24	25-29	.....	70-74	75 and over	Not stated
<i>Both sexes</i>									
TOTAL ECONOMICALLY ACTIVE									
Major division 1*.....									
Major group 111*.....									
Major group 112*..... (etc.)									
Major division 2*.....									
Major group 210*.....									
Major group 220*..... (etc.)									
.....									
.....									
Major division 0*.....									
Major group 000*.....									
<i>Male</i>									
(as for <i>Both sexes</i> )									
<i>Female</i>									
(as for <i>Both sexes</i> )									

\* The major division (one-digit) and major group (three-digit) codes of the 1968 revision of the *International Standard Industrial Classification of All Economic Activities* have been substituted for the division (one-digit) and major group (two-digit) codes of the earlier version of the ISIC, which were shown in the previous (photo-offset) edition of these recommendations.

<sup>a</sup> The treatment of unemployed persons (including those seeking work for the first time) should be clearly stated.

<sup>b</sup> Total country. Distinguish urban and rural.

<sup>c</sup> All ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

(15) ECONOMICALLY ACTIVE POPULATION BY OCCUPATION, AGE AND SEX (Recommended, first priority)

Population included: economically active population.

Classifications:

- (a) *Geographic division*: total country. Distinguish urban and rural (paras. 298-299).
- (b) *Occupation* (paras. 247-248): according to, or convertible to International Labour Organisation *International Standard Classification of Occupations, 1966* (ISCO), at least to the minor (two-digit) groups.\*
- (c) *Age* (paras. 176-178): under 15 years, 15-19,

20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated. The category "under 15 years" should include all ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

- (d) *Sex* (para. 276): male, female.

Use of the tabulation:

Since they are inextricably related, a discussion of the uses of this tabulation is set forth together with those of tabulation 14.

\* The ISCO, 1966 was not available at the time of the previous (photo-offset) edition of these recommendations. Since

it is now available, this paragraph has been revised to take into account specifically the ISCO, 1966, in place of the reference in the earlier issue to the "latest revision" of the ISCO.

ILLUSTRATION 15. ECONOMICALLY ACTIVE POPULATION BY OCCUPATION, AGE AND SEX <sup>a</sup>

(Recommended, first priority)

Geographic division, <sup>b</sup> sex and occupation	All ages	Age (in years)							
		Under 15 <sup>c</sup>	15-19	20-24	25-29	.....	70-74	75 and over	Not stated
<i>Both sexes</i>									
TOTAL ECONOMICALLY ACTIVE									
Major group 0/1*.....									
Minor group 0-1*.....									
Minor group 0-2/0-3*..									
(etc.)									
Major group 2*.....									
Minor group 2-0*.....									
Minor group 2-1*.....									
.									
.									
Major group X*.....									
Minor group X-1*.....									
Minor group X-2*.....									
Minor group X-3*.....									
Armed forces*.....									
<i>Male</i>									
(as for <i>Both sexes</i> )									
<i>Female</i>									
(as for <i>Both sexes</i> )									

\* The major and minor group codes of the *International Standard Classification of Occupations, 1966* have been substituted for the codes of the previous ISCO, which were shown in the earlier (photo-offset) issue of these recommendations.

<sup>a</sup> The treatment of unemployed persons (including those seeking work for the first time) should be clearly stated.

<sup>b</sup> Total country. Distinguish urban and rural.

<sup>c</sup> All ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

(16) ECONOMICALLY ACTIVE POPULATION BY STATUS, AGE AND SEX (Recommended, first priority)

Population included: economically active population.

Classifications:

- (a) *Geographic division*: total country. Distinguish urban and rural (paras. 298-299).
- (b) *Status* (paras. 281-282): employer, own-account worker, employee, unpaid family worker, member of producers' co-operative, not classifiable by status.
- (c) *Age* (paras. 176-178): under 15 years, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated. The category "under 15 years" should include all ages between the minimum age-limit

adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

(d) *Sex* (para. 276): male, female.

Use of the tabulation:

This tabulation provides the data which serve as a first indicator of socio-economic status. It also makes available useful data needed for planning of social welfare schemes, health insurance programmes etc., which frequently pertain only to the employee group.

A classification of unpaid family workers by sex and age is needed for international analysis of activity rates for females, in view of the different practices followed in defining and enumerating this group of workers in different countries.

ILLUSTRATION 16. ECONOMICALLY ACTIVE POPULATION BY STATUS, AGE AND SEX <sup>a</sup>

(Recommended, first priority)

<i>Geographic division,<sup>b</sup> sex and age (in years)</i>	<i>Total economically active</i>	<i>Status</i>					
		<i>Employer</i>	<i>Own- account worker</i>	<i>Employee</i>	<i>Unpaid family worker</i>	<i>Member of producers' co-operative</i>	<i>Not classifiable by status</i>
<i>Both sexes</i>							
ALL AGES .....							
Under 15 <sup>c</sup> .....							
15-19 .....							
20-24 .....							
25-29 .....							
30-34 .....							
35-39 .....							
40-44 .....							
45-49 .....							
50-54 .....							
55-59 .....							
60-64 .....							
65-69 .....							
70-74 .....							
75 and over .....							
Not stated .....							
<i>Male</i>							
(as for <i>Both sexes</i> )							
<i>Female</i>							
(as for <i>Both sexes</i> )							

<sup>a</sup> The treatment of unemployed persons (including those seeking work for the first time) should be clearly stated.

<sup>b</sup> Total country. Distinguish urban and rural.

<sup>c</sup> All ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if minimum is below 15 years.

(17) **ECONOMICALLY ACTIVE POPULATION BY STATUS, INDUSTRY AND SEX** (Recommended, first priority)

*Population included*: economically active population.

*Classifications*:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each principal locality. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Status* (paras. 281-282): employer, own-account worker, employee, unpaid family worker, member of producers' co-operative, not classifiable by status.
- (c) *Industry* (paras. 222-223): according to, or convertible to, the 1968 revision of United Nations *International Standard Industrial Classification of All Economic Activities* (ISIC), at least to the major (three-digit) groups.\*
- (d) *Sex* (para. 276): male, female.

*Use of the tabulation*:

Tabulations 17, 18 and 19 furnish a statistical inventory of a nation's manpower and its utilization that is of inestimable value as an aid in formulating economic policy and planning developmental programmes. Such data play an essential part in analyses of national product and national income. Studies of the proportion of the economically active population in each industrial sector of the economy and of the shifts from one sector to another give information on the level and

\* The 1968 revision of the ISIC was not available at the time of the previous (photo-offset) edition of these recommendations. Since it is now available, this paragraph has been revised to take into account specifically the 1968 ISIC, in place of the reference in the earlier issue to the "latest" revision of the ISIC. It also takes into account the fact that the major groups of the 1968 ISIC utilize a three-digit code rather than the two-digit code previously utilized.

trend of industrialization and on important aspects of the country's potential for economic development. Studies of migration from rural areas to cities require analysis of the occupational and industrial structure of manpower in the cities and often of the major areas of out-migration, as an aid to assessment of economic aspects of internal migration. Studies of these types are also relevant to programmes of resettlement and to the formulation of policy with respect to internal migration. Also, decisions as to possible sites for industrial establishments require information on the occupational and industrial structure of the labour force in various localities and regions of the country.

In planning for the development and expansion of an educational system and efficient utilization of manpower resources, studies are needed which assess requirements of labour in different industries and occupations.

The cross-classifications of occupation and of industry with status (as employer, employee etc.) give indications of the occupations and industries in which particular status groups, such as own-account workers and unpaid family workers, are employed, therefore making it possible, for example, to analyse the effect of the inclusion of unpaid family workers on the industrial distribution of the labour force. This is especially important because of the likelihood of significant variations in the definitions of unpaid family workers and in the interpretation of these definitions by enumerators or respondents. In addition, information on the distribution by status of the labour force in a particular industry is a useful indication of the degree of development of that sector, i.e., the extent to which it employs wage and salary workers as contrasted with the unpaid family workers who are typical of cottage-type industry.

Data on the number of wage and salary workers in different industries are often needed as bench-mark data for current statistics obtained from establishment reports.

ILLUSTRATION 17. ECONOMICALLY ACTIVE POPULATION BY STATUS, INDUSTRY AND SEX <sup>a</sup>

(Recommended, first priority)

Geographic division, <sup>b</sup> sex and industry	Total economically active	Status					
		Employer	Own- account worker	Employee	Unpaid family worker	Member of producers' co-operative	Not classifiable by status
<i>Both sexes</i>							
TOTAL ECONOMICALLY ACTIVE							
Major division 1*.....							
Major group 111*.....							
Major group 112*.....							
(etc.)							
Major division 2*.....							
Major group 210*.....							
Major group 220*.....							
(etc.)							
.....							
.....							
Major division 0*.....							
Major group 000*.....							
<i>Male</i>							
(as for <i>Both sexes</i> )							
<i>Female</i>							
(as for <i>Both sexes</i> )							

\* The major division (one-digit) and major group (three-digit) codes of the 1968 revision of the *International Standard Industrial Classification of all Economic Activities* have been substituted for the division (one-digit) and major group (two-digit) codes of the previous version of the ISIC, which were shown in the earlier (photo-offset) edition of these recommendations.

<sup>a</sup> The treatment of unemployed persons (including those seeking work for the first time) should be clearly stated.

<sup>b</sup> (a) Total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b).

(18) ECONOMICALLY ACTIVE POPULATION BY STATUS, OCCUPATION AND SEX (Recommended, first priority)

*Population included:* economically active population.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division, (iii) each principal locality. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Status* (paras. 281-282): employer, own-account worker, employee, unpaid family worker, member of producers' co-operative, not classifiable by status.

(c) *Occupation* (paras. 247-248): according to, or convertible to International Labour Organisation, *International Standard Classification of Occupations, 1966* (ISCO, 1966), at least to the minor (two-digit) groups.\*

(d) *Sex* (para. 276): male, female.

*Use of the tabulation:*

Since they are inextricably related, a discussion of the uses of this tabulation is set forth together with those of tabulation 17.

\*The ISCO, 1966 was not available at the time of the previous (photo-offset) edition of these recommendations. Since it is now available, this paragraph has been revised to take into account specifically the ISCO, 1966, in place of the reference in the earlier issue to the "latest revision" of the ISCO.

ILLUSTRATION 18. ECONOMICALLY ACTIVE POPULATION BY STATUS, OCCUPATION AND SEX<sup>a</sup>  
(Recommended, first priority)

<i>Geographic division,<sup>b</sup> sex and occupation</i>	<i>Total economically active</i>	<i>Status</i>					<i>Not classifiable by status</i>
		<i>Employer</i>	<i>Own- account worker</i>	<i>Employee</i>	<i>Unpaid family worker</i>	<i>Member of producers' co-operative</i>	
<i>Both sexes</i>							
TOTAL ECONOMICALLY ACTIVE							
Major group 0/1*.....							
Minor group 0-1*.....							
Minor group 0-2/0-3*..							
(etc.)							
Major group 2*.....							
Minor group 2-0*.....							
Minor group 2-1*.....							
.....							
Major group X*.....							
Minor group X-1*.....							
Minor group X-2*.....							
Minor group X-3*.....							
Armed forces*.....							
<i>Male</i>							
(as for <i>Both sexes</i> )							
<i>Female</i>							
(as for <i>Both sexes</i> )							

\*The major and minor group codes of the *International Standard Classification of Occupations, 1966* have been substituted for the codes of the previous ISCO, which were shown in the earlier (photo-offset) edition of these recommendations.

<sup>a</sup> The treatment of unemployed persons (including those seeking work for the first time), should be clearly stated.

<sup>b</sup> (a) Total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b).

(19) ECONOMICALLY ACTIVE POPULATION BY INDUSTRY, OCCUPATION AND SEX (Recommended, second priority)

Population included: economically active population.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each principal locality. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Industry* (paras. 222-223): according to, or convertible to, the 1968 revision of United Nations, *International Standard Industrial Classification of All Economic Activities* (ISIC), at least to the major (three-digit) groups.\*
- (c) *Occupation* (paras. 247-248): according to, or convertible to International Labour Organisa-

\* The 1968 revision of the ISIC was not available at the time of the previous (photo-offset) edition of these recommendations. Since it is now available, this paragraph has been revised to take into account specifically the 1968 ISIC, in place of the reference in the earlier issue to the "latest" revision of the ISIC. It also takes into account the fact that the major groups of the 1968 ISIC utilize a three-digit code rather than the two-digit code previously utilized.

tion *International Standard Classification of Occupations, 1966* (ISCO, 1966), at least to the minor (two-digit) groups. If the detailed cross-classification according to the major groups of ISIC and the minor groups of ISCO is not feasible, the major divisions (one-digit) of ISIC or, preferably, the divisions (two-digit) of ISIC may be substituted for the major groups of ISIC, but the minor groups of ISCO should be retained because the detailed occupation data are of greater utility than the detailed industry data.\*\*

- (d) *Sex* (para. 276): male, female.

Use of the tabulation:

Since they are inextricably related, a discussion of the uses of this tabulation is set forth together with those of tabulation 17.

\*\* The ISCO, 1966 was not available at the time of the previous (photo-offset) edition of these recommendations. Since it is now available, this paragraph has been revised to take into account specifically the ISCO, 1966, in place of the reference in the earlier issue to the "latest revision" of the ISCO. As a consequence of the 1968 revision of the ISIC, described above, the paragraph has also been revised in regard to the categories of the ISIC that may be substituted for the major groups recommended.

ILLUSTRATION 19. ECONOMICALLY ACTIVE POPULATION BY INDUSTRY, OCCUPATION AND SEX<sup>a</sup>  
(Recommended, second priority)

Geographic division, <sup>b</sup> sex and occupation	Total economically active	Industry <sup>c</sup>						
		Major division 1*			Major division 2*			Major division 0*
		Major group			Major group			Major group
		111*	112*	(etc.)	210*	220*	(etc.)	000*
<i>Both sexes</i>								
TOTAL ECONOMICALLY ACTIVE								
Major group 0/1 **								
Minor group 0-1 **								
Minor group 0-2/0-3 **								
(etc.)								
Major group 2 **								
Minor group 2-0 **								
Minor group 2-1 **								
Major group X **								
Minor group X-1 **								
Minor group X-2 **								
Minor group X-3 **								
Armed forces **								
<i>Male</i>								
(as for <i>Both sexes</i> )								
<i>Female</i>								
(as for <i>Both sexes</i> )								

\* The major division (one-digit) and major group (three-digit) codes of the 1968 revision of the *International Standard Industrial Classification of All Economic Activities* have been substituted for the division (one-digit) and major group (two-digit) codes of the previous version of the ISIC, which were shown in the earlier (photo-offset) edition of these recommendations.

\*\* The major and minor group codes of the *International Standard Classification of Occupations, 1966* have been substituted for the codes of the previous ISCO, which were shown in the earlier (photo-offset) edition of these recommendations.

<sup>a</sup> The treatment of unemployed persons (including those seeking work for the first time) should be clearly stated.

<sup>b</sup> (a) Total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b).

<sup>c</sup> If the classification by major groups of the 1968 revision of the *International Standard Industrial Classification of All Economic Activities* is not feasible, the total for each major division or, preferably, for each division may be shown instead.

(20) ECONOMICALLY ACTIVE POPULATION BY OCCUPATION, MARITAL STATUS, AGE AND SEX (Recommended, second priority)

*Population included:* economically active population.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Occupation* (paras. 247-248): according to, or convertible to International Labour Organisation, *International Standard Classification of Occupations, 1966* (ISCO, 1966), at least to the major (one-digit) groups.\*
- (c) *Marital status* (paras. 238-244): single, married, other, not stated.
- (d) *Age* (paras. 176-178): under 15 years, 15-24, 25-44, 45-64, 65 and over, not stated. The category "under 15 years" should include all ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

\* The ISCO, 1966 was not available at the time of the previous (photo-offset) edition of these recommendations. Since it is now available, these paragraphs have been revised to take into account specifically the ISCO, 1966, in place of the reference in the earlier issue to the "latest revision" of the ISCO.

(e) *Sex* (para. 276): male, female.

*Use of the tabulation:*

The data for the female population in this tabulation, together with those from the tabulation of total female population by marital status and age, provide material for the analysis of the relation of marital status to the broad occupation of economically active women and of the probable effect thereon of any anticipated changes in the distribution of the female population by marital status.

The data for the male population may give an approximate indication of the number of workers who are responsible for the support of dependants, since most married men who are economically active may be presumed to have dependants, while most economically active single persons are probably without dependants.

It should be noted that, unlike the other recommended tabulations which include a classification by occupation, this tabulation calls for occupation categories according to, or convertible to, at least the nine major groups of ISCO, 1966, rather than the eighty-four minor groups. Although data according to the more detailed categories would be interesting and useful, because it would give a more precise picture of occupations which attract (or are available to) persons in specific age-sex-marital-status categories, it would necessitate an unduly expanded tabulation.\*

ILLUSTRATION 20. ECONOMICALLY ACTIVE POPULATION BY OCCUPATION, MARITAL STATUS, AGE AND SEX <sup>a</sup>

(Recommended, second priority)

Geographic division, <sup>b</sup> sex, marital status and age (in years)	Total economically active	Occupation			
		Major group 0/1 *	Major group 2*	.....	Major group X*
<i>Both sexes</i>					
TOTAL .....					
Under 15 <sup>c</sup> .....					
15-24 .....					
25-44 .....					
45-64 .....					
65 and over .....					
Not stated .....					
Single .....					
Under 15 <sup>c</sup> .....					
15-24 .....					
.....					
.....					
Not stated .....					
Married .....					
Under 15 <sup>c</sup> .....					
15-24 .....					
.....					
.....					
Not stated .....					
Other .....					
Under 15 <sup>c</sup> .....					
15-24 .....					
.....					
.....					
Not stated .....					
Not stated .....					
Under 15 <sup>c</sup> .....					
15-24 .....					
.....					
.....					
Not stated .....					
<i>Male</i>					
(as for <i>Both sexes</i> )					
<i>Female</i>					
(as for <i>Both sexes</i> )					

\* The major group code of the *International Standard Classification of Occupations, 1966* has been substituted for the code of the previous ISCO, which was shown in the earlier (photo-offset) edition of these recommendations.

<sup>a</sup> The treatment of unemployed persons (including those seeking work for the first time) should be clearly stated.

<sup>b</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

<sup>c</sup> All ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

(21) FEMALE POPULATION ... YEARS OF AGE AND OVER BY TYPE OF ACTIVITY, MARITAL STATUS AND AGE (Recommended, first priority)

Population included: economically active female population.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each principal locality. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Type of activity* (paras. 288-297): economically active (of which, (i) employed, (ii) unemployed (distinguishing persons seeking work for the first time)), not economically active, not stated.
- (c) *Marital status* (paras. 238-244): single, married, widowed, divorced, separated, not stated.
- (d) *Age* (paras. 176-178): under 15 years, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-

54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated. The category "under 15 years" should include all ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

Use of the tabulation:

These data provide material for the analysis of the relation of marital status to the economic activity of women and of the probable effect thereon of any anticipated changes in the distribution of the female population by marital status. If the results are tabulated separately for urban and rural areas, as recommended, they will provide useful approximations of the marital status of women engaged in agriculture and in non-agricultural work. At the same time, the data show the marital status groups in which untapped sources of female labour supply can be found.

ILLUSTRATION 21. FEMALE POPULATION ... YEARS OF AGE AND OVER BY TYPE OF ACTIVITY, MARITAL STATUS AND AGE (Recommended, first priority)

Geographic division, <sup>a</sup> marital status and age (in years)	Total females ... years of age and over	Type of activity				Not stated
		Economically active			Not economically active	
		Employed	Unemployed			
			Total	Seeking work for the first time		
TOTAL .....						
Under 15 <sup>b</sup> .....						
15-19 .....						
20-24 .....						
25-29 .....						
30-34 .....						
35-39 .....						
40-44 .....						
45-49 .....						
50-54 .....						
55-59 .....						
60-64 .....						
65-69 .....						
70-74 .....						
75 and over .....						
Not stated .....						
Single .....						
(as for Total) ..						
Married .....						
(as for Total) ..						
Widowed .....						
(as for Total) ..						
Divorced .....						
(as for Total) ..						
Separated .....						
(as for Total) ..						
Not stated .....						
(as for Total) ..						

<sup>a</sup> (a) Total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b).

<sup>b</sup> All ages between the lower age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

(22) POPULATION 10 YEARS OF AGE AND OVER BY LITERACY, AGE AND SEX (Recommended, first priority)

*Population included:* all persons 10 years of age and over.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Literacy* (paras. 228-231): literate, illiterate, not stated.
- (c) *Age* (paras. 176-178): 10-14 years, 15-19, 20-24, 25-29, 30-34, 35-44, 45-54, 55-64, 65 and over, not stated (but over 9 years).
- (d) *Sex* (para. 276): male, female.

*Use of the tabulation:*

This tabulation provides one of the indicators of national levels of living and a measure of one of the factors in the national capacity for technological and

cultural development; it is needed for tracing the progress in educational development of past generations and projecting future trends.

In countries where the adult population is largely illiterate, the tabulation is of immediate use in planning for adult literacy, particularly if the data are tabulated for local areas.

In addition, these data serve as the denominator in the computation of vital rates differentiated by literacy used as a socio-economic variable, such as birth-rates by literacy of mother and marriage and divorce rates by literacy of husband and wife.

Census statistics of literacy will be most useful during the decade of the 1970 censuses in the measurement of the impact of the World Campaign for Universal Literacy undertaken by UNESCO with the support of the United Nations.<sup>2</sup> An experimental mass literacy programme is being conducted by UNESCO.

<sup>2</sup> *Official Records of the General Assembly, Eighteenth Session, Supplement No. 15 (A/5515), resolution 1937 (XVIII), pp. 28-29.*

ILLUSTRATION 22. POPULATION 10 YEARS OF AGE AND OVER BY LITERACY, AGE AND SEX  
(Recommended, first priority)

<i>Geographic division,<sup>a</sup> sex and age (in years)</i>	<i>Total</i>	<i>Literacy</i>		
		<i>Literate</i>	<i>Illiterate</i>	<i>Not stated</i>
<i>Both sexes</i>				
TOTAL 10 AND OVER...				
10-14 .....				
15-19 .....				
20-24 .....				
25-29 .....				
30-34 .....				
35-44 .....				
45-54 .....				
55-64 .....				
65 and over .....				
Not stated .....				
<i>Male</i>				
(as for <i>Both sexes</i> )				
<i>Female</i>				
(as for <i>Both sexes</i> )				

<sup>a</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

(23) POPULATION 25 YEARS OF AGE AND OVER BY EDUCATIONAL ATTAINMENT, AGE AND SEX (Recommended, first priority)

*Population included:* all persons 25 years of age and over.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Educational attainment* (paras. 203-208):
  - (i) Education preceding the first level and less than one completed grade at the first level;
  - (ii) Education at the first level, by single grades, grade not stated;
  - (iii) Education at the second level, according to type (general, vocational, teacher training), by single grades, grade not stated;
  - (iv) Education at the third level, according to type (university or equivalent institution, non-university teacher education, other non-university), by single grades, grade not stated;

(v) Special education (not classified by level);

(vi) Level not stated.

(c) *Age* (paras. 176-178): 25-34 years, 35-44, 45-54, 55-64, 65 and over, not stated (but over 24 years).

(d) *Sex* (para. 276): male, female.

*Use of the tabulation:*

This tabulation provides an important indication of the capacity of the nation for economic and social development. It furnishes material for the comparison of the present educational equipment of the adult population with the present and anticipated future requirements of educated manpower for various types of economic activities. Such a comparison may serve as a guide both to national policy for the development of the educational system and to the planning of economic development programmes that it would be feasible to carry out in view of manpower requirements. The tabulation also makes it possible to compute the "index of educational attainment", i.e., the median number of years of formal schooling completed by the population 25 years of age and over, which is a valuable supplementary indicator of national levels of living.

ILLUSTRATION 23. POPULATION 25 YEARS OF AGE AND OVER BY EDUCATIONAL ATTAINMENT, AGE AND SEX

(Recommended, first priority)

Geographic division, <sup>a</sup> sex and educational attainment	Total 25 and over	Age (in years)					65 and over	Not stated
		25-34	35-44	45-54	55-64			
<i>Both sexes</i>								
TOTAL .....								
Less than 1 completed grade at first level...								
First level:								
Grade 1 .....								
.								
.								
Grade not stated .....								
Second level:								
General:								
Grade 1 .....								
.								
.								
Grade not stated .....								
Vocational:								
Grade 1 .....								
.								
.								
Grade not stated .....								
Teacher training:								
Grade 1 .....								
.								
.								
Grade not stated .....								
Third level:								
University or equivalent institution:								
Grade 1 .....								
.								
.								
Grade not stated .....								
Non-university teacher education:								
Grade 1 .....								
.								
.								
Grade not stated .....								
Other non-university:								
Grade 1 .....								
.								
.								
Grade not stated .....								
Special education (not classified by level)...								
Level not stated .....								
<i>Male</i>								
(as for <i>Both sexes</i> )								
<i>Female</i>								
(as for <i>Both sexes</i> )								

<sup>a</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

(24) POPULATION ...<sup>3</sup> TO 24<sup>3</sup> YEARS OF AGE BY SCHOOL ATTENDANCE, EDUCATIONAL ATTAINMENT, AGE AND SEX (Recommended, first priority)

*Population included:* all persons between the usual age for entering the first level of school and 24<sup>3</sup> years of age.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *School attendance* (paras. 274-275): attending school, not attending school, not stated.
- (c) *Educational attainment* (paras. 203-208):
  - (i) Education preceding the first level and less than one completed grade at the first level;
  - (ii) Education at the first level, by single grades, grade not stated;
  - (iii) Education at the second level, according to type (general, vocational, teacher training), by single grades, grade not stated;
  - (iv) Education at the third level, according to type (university or equivalent institution, non-university teacher education, other non-university), by single grades, grade not stated;
  - (v) Special education (not classified by level);
  - (vi) Level not stated.
- (d) *Age* (paras. 176-178): ... to 9 years, 10-14, 15-19, 20-24, not stated (but under 25). The lower age-limit should be the usual age for entrance into the first level of school. If a significant number of older persons are attending school, the upper age-limit should be extended as appropriate and the necessary additional categories should be added to the age classification.

<sup>3</sup> See *Age*, subpara. (d).

(e) *Sex* (para. 276): male, female.

*Use of the tabulation:*

Data on the educational attainment of the school-age population are not meaningful unless they are cross-classified by school attendance. With this cross-classification, they are exceedingly valuable for analysing the efficiency of the educational system with reference to the extent of retardation or promotion of pupils through the successive school grades, while the same data for school-age children not attending school provide an indication of the frequency with which children drop out of school before completing certain standards. The cross-classification of the two characteristics also provides an indication of the likelihood that persons with a particular educational attainment will continue their formal education.

The usefulness of the data can be increased if ages are tabulated in single years. Because, however, the single-year categories will produce an extremely large tabulation and because a separate tabulation of school attendance by single years of age is also recommended (tabulation 25), classification by 5-year age groups is considered satisfactory for the present tabulation.

The combination of data on school attendance and educational attainment yields information on net attendance in schools at each level. This makes possible the approximate computation of several indicators of levels of living, including (a) *total school enrolment ratio*, which is the total enrolment in all schools below the third level as a percentage ratio to the population aged 5-19 inclusive, (b) *primary school enrolment ratio*, which is the total enrolment in schools at the first level as a percentage ratio to the population aged 5-14 inclusive, (c) *secondary school enrolment ratio*, which is the total enrolment in all schools at the second level as a percentage ratio to the population aged 15-19 years inclusive, and (d) *higher education enrolment ratio*, which is the total enrolment in all schools at the third level per 100,000 population.

ILLUSTRATION 24. POPULATION ...<sup>a</sup> TO 24<sup>b</sup> YEARS OF AGE BY SCHOOL ATTENDANCE, EDUCATIONAL ATTAINMENT, AGE AND SEX  
(Recommended, first priority)

Geographic division, <sup>c</sup> school attendance and educational attainment	Sex and age (in years)							
	Total 24 <sup>a b</sup>	Both sexes					Male	Female
		...-9 <sup>a</sup>	10-14	15-19	20-24 <sup>b</sup>	Not stated	(as for Both sexes)	(as for Both sexes)
TOTAL .....								
Less than 1 completed grade at first level...								
First level:								
Grade 1 .....								
.								
Grade not stated .....								
Second level:								
General:								
Grade 1 .....								
.								
Grade not stated .....								
Vocational:								
Grade 1 .....								
.								
Grade not stated .....								
Teacher training:								
Grade 1 .....								
.								
Grade not stated .....								
Third level:								
University or equivalent institution:								
Grade 1 .....								
.								
Grade not stated .....								
Non-university teacher education:								
Grade 1 .....								
.								
Grade not stated .....								
Other non-university:								
Grade 1 .....								
.								
Grade not stated .....								
Special education (not classified by level)								
Level not stated .....								
Attending school								
(as for Total)								
Not attending school								
(as for Total)								
Not stated								
(as for Total)								

<sup>a</sup> The lower age-limit should be the usual age for entrance into school.

<sup>b</sup> If a significant number of older persons are attending school, the upper age-limit should be extended as appropriate and the necessary additional categories should be added to the age classification.

<sup>c</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

(25) POPULATION . . .<sup>4</sup> TO 24<sup>4</sup> YEARS OF AGE, BY SCHOOL ATTENDANCE, SINGLE YEARS OF AGE AND SEX (Recommended, first priority)

*Population included:* all persons between the usual age for entering the first level of school and 24<sup>4</sup> years of age.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *School attendance* (paras. 274-275): attending school, not attending school, not stated.
- (c) *Age* (paras. 176-178): 5 years, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, not stated (but under 25). The lower age-limit should be the usual age for entrance into the first level of school. If a significant number of older persons are attending school, the upper age should be extended as appropriate and the

<sup>4</sup> See *Age*, subpara. (c).

necessary additional categories should be added to the age classification.

(d) *Sex* (para. 276): male, female.

*Use of the tabulation:*

The classification of young persons attending and not attending school, by single years of age and sex, is essential for studies of the numerical relationship between the population of school age and the population actually in school. The proportion of the school-age population that is able to take advantage of the educational system is one of the first types of information required for the assessment of the adequacy of the present educational system of a country.

School enrolment statistics derived from institutional records are not adequate, in many countries, to provide an exact measure of total attendance or all valuable classifications of characteristics of the school-going population, particularly the age classification. Even countries with comprehensive, detailed statistics compiled from records of educational institutions can benefit from a periodic assessment of the accuracy of these statistics by comparison with this census information on net school attendance.

ILLUSTRATION 25. POPULATION . . .<sup>a</sup> TO 24<sup>b</sup> YEARS OF AGE, BY SCHOOL ATTENDANCE, SINGLE YEARS OF AGE AND SEX

(Recommended, first priority)

<i>Geographic division,<sup>c</sup> sex and age (in years)</i>	<i>Total</i>	<i>School attendance</i>		
		<i>Attending school</i>	<i>Not attending school</i>	<i>Not stated</i>
<i>Both sexes</i>				
TOTAL .....				
5 <sup>a</sup> .....				
6 .....				
7 .....				
8 .....				
9 .....				
10 .....				
11 .....				
12 .....				
13 .....				
14 .....				
.....				
.....				
.....				
24 <sup>b</sup> .....				
Not stated (but under 25) <sup>b</sup> .....				
<i>Male</i>				
(as for <i>Both sexes</i> )				
<i>Female</i>				
(as for <i>Both sexes</i> )				

<sup>a</sup> The lower age-limit should be the usual age for entrance into school.

<sup>b</sup> If a significant number of older persons are attending school, the upper age-limit should be extended as appropriate and the necessary additional categories should be added to the age classification.

<sup>c</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

(26) ECONOMICALLY ACTIVE POPULATION BY OCCUPATION, EDUCATIONAL ATTAINMENT, AGE AND SEX (Recommended, second priority)

Population included: economically active population.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division.
- (b) *Occupation* (paras. 247-248): according to, or convertible to International Labour Organisation *International Standard Classification of Occupations, 1966* (ISCO, 1966), at least to the minor (two-digit) groups.\*
- (c) *Educational attainment* (paras. 203-208): first level *not completed*, first level *completed*, second

\*The ISCO, 1966 was not available at the time of the previous (photo-offset) edition of these recommendations. Since it is now available, this paragraph has been revised to take into account specifically the ISCO, 1966, in place of the reference in the earlier issue to the "latest revision" of the ISCO.

level started but *not completed*, second level *completed*, third level started but *not completed*, third level *completed*, special education (not classified by level), not stated.

- (d) *Age* (paras. 176-178): under 15 years, 15-19, 20-24, 25-44, 45-64, 65 and over, not stated. The category "under 15 years" should include all ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if the minimum is below 15 years.

- (e) *Sex* (para. 276): male, female.

Use of the tabulation:

This tabulation provides data needed for the analysis of present requirements for educated manpower and the degree to which they are satisfied by the present manpower resources. It also furnishes information on the extent to which education is being utilized in the economic structure.

ILLUSTRATION 26. ECONOMICALLY ACTIVE POPULATION BY OCCUPATION, EDUCATIONAL ATTAINMENT, AGE AND SEX <sup>a</sup>

(Recommended, second priority)

Geographic division, <sup>b</sup> sex, educational attainment and age (in years)	Total economically active	Occupation									Armed forces*
		Major group 0/1*			Major group 2*			Major group X*			
		Minor group			Minor group			Minor group			
		0-1*	0-2/ 0-3*	(etc.)	2/0	2-1*	(etc.)	X-1	X-2	X-3	
<i>Both sexes</i>											
ALL LEVELS OF EDUCATION.....											
Under 15 <sup>c</sup> .....											
15-19.....											
20-24.....											
25-44.....											
45-64.....											
65 and over.....											
Not stated.....											
First level of education not completed (as for Total)											
First level completed..... (as for Total)											
Second level started but not completed (as for Total)											
Second level completed..... (as for Total)											
Third level started but not completed (as for Total)											
Third level completed..... (as for Total)											
Special education (not classified by level)..... (as for Total)											
Level not stated..... (as for Total)											
<i>Male</i>											
(as for <i>Both sexes</i> )											
<i>Female</i>											
(as for <i>Both sexes</i> )											

\* The major and minor group codes of the *International Standard Classification of Occupations, 1966* have been substituted for the codes of the previous ISCO, which were shown in the earlier (photo-offset) edition of these recommendations.

<sup>a</sup> The treatment of unemployed persons (including those seeking work for the first time) should be clearly stated.

<sup>b</sup> (a) Total country, (b) each major civil division.

<sup>c</sup> All ages between the minimum age-limit adopted by the country for census questions on economic activity and 14 years, if minimum is below 15 years.

(27) FEMALE POPULATION 15 YEARS OF AGE AND OVER BY AGE AND NUMBER OF CHILDREN BORN ALIVE (Recommended, first priority)

*Population included:* female population 15 years of age and over. If the population included is restricted to ever-married females, this fact should be clearly stated.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Age* (paras. 176-178): 15-19 years, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated.
- (c) *Number of children born alive* (paras. 184-188): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and over, not stated and, separately, the aggregate number of children born alive to women in each age category.

*Use of the tabulation:*

Although census data on fertility cannot serve as a substitute for reliable birth-registration statistics, they

are particularly valuable for countries where birth-registration statistics are lacking or deficient because they can be used to estimate current age-specific fertility rates and the crude incidence of births in the total population. In addition, they are useful as a supplement to satisfactory registration data because they provide a summary of the fertility experience of the female population.

The principal measures of fertility that can be derived from this tabulation are (a) the gross fertility ratio (average number of children born alive to women of child-bearing age and over), (b) the average number of children born alive to women who have reached the end of the child-bearing period (i.e., 50 years and over), (c) the proportion of women who have had no children by the end of their reproductive life, (d) the average number of children born per woman who has already borne at least one child and (e) cumulative average gross fertility ratios by age groups.

The data also provide the base for the computation of birth-rates specific for parity. The use of information from a series of censuses makes it possible to identify cohorts of women and to study their reproductive patterns as they advance from one age group to another.

ILLUSTRATION 27. FEMALE POPULATION 15 YEARS OF AGE AND OVER BY AGE AND NUMBER OF CHILDREN BORN ALIVE<sup>a</sup>  
(Recommended, first priority)

<i>Geographic division<sup>b</sup> and age (in years)</i>	<i>Total females</i>	<i>Female population with indicated number of children born alive</i>						<i>Number of children born alive</i>
		<i>0</i>	<i>1</i>	<i>2</i>	.....	<i>10 and over</i>	<i>Not stated</i>	
TOTAL 15 AND OVER .....								
15-19 .....								
20-24 .....								
25-29 .....								
30-34 .....								
35-39 .....								
40-44 .....								
45-49 .....								
50-54 .....								
55-59 .....								
60-64 .....								
65-69 .....								
70-74 .....								
75 and over .....								
Not stated .....								

<sup>a</sup> If the population included is restricted to ever-married females, this fact should be clearly stated.  
<sup>b</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

(28) FEMALE POPULATION 15 YEARS OF AGE AND OVER BY AGE AND NUMBER OF CHILDREN LIVING (Recommended, first priority)

*Population included:* female population 15 years of age and over. If the population included is restricted to ever-married females, this fact should be clearly stated.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Age* (paras. 176-178): 15-19 years, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated.
- (c) *Number of children living* (paras. 189-190): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and over, not stated, and, separately, the aggregate number of children living of women in each age category.

*Use of the tabulation:*

The data from this tabulation are most useful for countries where death-registration statistics are lacking or deficient, because they take account of the mortality of live-born children during the lifetime of their mother.

Two measures of fertility can be derived from the tabulations. These are (a) the net fertility ratio (average number of children surviving to women of child-bearing age and over) and (b) cumulative average net fertility ratios by age groups.

Some measure of mortality in the generation can be obtained by comparison of the net fertility ratio derived from this tabulation with the gross fertility ratio which can be derived from tabulation 27. This measure is particularly valuable where death-rates estimated from fully adequate vital registration statistics are not available.

In addition to the above-mentioned measures of fertility and mortality, the tabulation also provides information for the analysis of family composition by number of living offspring. These data cannot be obtained from birth-registration statistics; neither can they be obtained from the census information on relationship to head of household because census families comprise only those persons who live and are enumerated within the same household; they do not necessarily, therefore, include all the living children of the woman enumerated. A tabulation of families by number of living issue, therefore, can be useful to all countries.

ILLUSTRATION 28. FEMALE POPULATION 15 YEARS OF AGE AND OVER BY AGE AND NUMBER OF CHILDREN LIVING<sup>a</sup>  
(Recommended, first priority)

<i>Geographic division<sup>b</sup> and age (in years)</i>	<i>Total females</i>	<i>Female population with indicated number of children living</i>						<i>Number of children living</i>
		<i>0</i>	<i>1</i>	<i>2</i>	.....	<i>10 and over</i>	<i>Not stated</i>	
TOTAL 15 AND OVER .....								
15-19 .....								
20-24 .....								
25-29 .....								
30-34 .....								
35-39 .....								
40-44 .....								
45-49 .....								
50-54 .....								
55-59 .....								
60-64 .....								
65-69 .....								
70-74 .....								
75 and over .....								
Not stated .....								

<sup>a</sup> If the population included is restricted to ever-married females, this fact should be clearly stated.  
<sup>b</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

- (29) FEMALE POPULATION 15 YEARS OF AGE AND OVER BY AGE, NUMBER OF CHILDREN BORN ALIVE AND EDUCATIONAL ATTAINMENT (Recommended, second priority)

*Population included:* female population 15 years of age and over. If the population included is restricted to ever-married females, this fact should be clearly stated.

*Classifications:*

- (a) *Geographic division:* (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Age* (paras. 176-178): 15-19 years, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated.
- (c) *Number of children born alive* (paras. 184-188): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and over, not stated,

and, separately, the aggregate number of children born alive to all women in each age category.

- (d) *Educational attainment* (paras. 203-208): first level *not completed*, first level *completed*, second level started but *not completed*, second level *completed*, third level stated but *not completed*, third level *completed*, special education (not classified by level), not stated.

*Use of the tabulation:*

This tabulation provides all the measures of fertility that can be derived from tabulation 27 and likewise provides the base for the computation of birth-rates specific for parity. In addition, it makes available information on educational attainment, which is considered to be closely related to fertility differentials and is likely to become increasingly important with educational advances among women.

ILLUSTRATION 29. FEMALE POPULATION 15 YEARS OF AGE AND OVER BY AGE, NUMBER OF CHILDREN BORN ALIVE AND EDUCATIONAL ATTAINMENT<sup>a</sup>

(Recommended, second priority)

<i>Geographic division<sup>b</sup> educational attainment and age</i>	<i>Total females</i>	<i>Female population with indicated number of children born alive</i>					<i>Number of children born alive</i>	
		<i>0</i>	<i>1</i>	<i>2</i>	<i>.....</i>	<i>10 and over</i>		<i>Not stated</i>
<i>All levels of education</i>								
TOTAL 15 AND OVER .....								
15-19 .....								
.....								
.....								
70-74 .....								
75 and over .....								
Not stated .....								
<i>First level of education not completed (as for All levels of education)</i>								
<i>First level completed (as for All levels of education)</i>								
<i>Second level started but not completed (as for All levels of education)</i>								
<i>Second level completed (as for All levels of education)</i>								
<i>Third level started but not completed (as for All levels of education)</i>								
<i>Third level completed (as for All levels of education)</i>								
<i>Special education (not classified by level) (as for All levels of education)</i>								
<i>Level not stated (as for All levels of education)</i>								

<sup>a</sup> If the population included is restricted to ever-married females, this fact should be clearly stated.

<sup>b</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

(30) POPULATION BY DURATION OF RESIDENCE IN LOCALITY AND MAJOR CIVIL DIVISION, AGE AND SEX (Other useful)

*Population included*: total population.

*Classifications*:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each principal locality. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Duration of residence in locality* (paras. 200-202): since birth; not since birth, resident for: less than 1 year, 1-4 years, 5-9 years, 10 or more years, number of years not stated; transient or visitor; not stated whether resident, transient or visitor. The last two categories are needed only if the tabulation is prepared on the basis of the population found in each area at the time of the census; it is not required if

the tabulation is based on the resident population of each area.

- (c) *Duration of residence in major civil division* (paras. 200-202): as for (b).
- (d) *Age* (paras. 176-178): under 1 year, 1-4, 5-9, 10-14, 15-19, 20-24, 25-34, 35-44, 45-54, 55-64, 65 and over, not stated.
- (e) *Sex* (para. 276): male, female.

*Use of the tabulation*:

This tabulation provides information on net migration levels. It also shows the direction of in-migration in terms of major civil divisions of the country and the most important localities. Such data are useful for preparing estimates of the future population of specific areas of the country. These estimates are needed both for planning in areas of anticipated growth and for the determination of policy on internal migration and possible measures which can be employed to affect its trend.

ILLUSTRATION 30. POPULATION BY DURATION OF RESIDENCE IN LOCALITY AND MAJOR CIVIL DIVISION, AGE AND SEX

(Other useful)

Geographic division, <sup>a</sup> sex and duration of residence	All ages	Age (in years)									
		Under 1	1-4	5-9	.....	20-24	25-34	.....	55-64	65 and over	Not stated
<i>Both sexes</i>											
TOTAL .....											
Resident <sup>b</sup> .....											
Resident in major civil division since birth.....											
Resident in locality since birth.....											
Not resident in locality since birth.....											
Resident in locality less than 1 year.....											
Resident in locality 1-4 years.....											
Resident in locality 5-9 years.....											
Resident in locality 10 or more years.....											
Duration of residence in locality not stated											
Not resident in major civil division since birth											
Resident in major civil division less than 1 year											
Resident in major civil division 1-4 years.....											
Resident in locality less than 1 year.....											
Resident in locality 1-4 years.....											
Duration of residence in locality not stated..											
Resident in major civil division 5-9 years.....											
Resident in locality less than 1 year.....											
Resident in locality 1-4 years.....											
Resident in locality 5-9 years.....											
Duration of residence in locality not stated..											
Resident in major civil division 10 or more years											
Resident in locality less than 1 year.....											
Resident in locality 1-4 years.....											
Resident in locality 5-9 years.....											
Resident in locality 10 or more years.....											
Duration of residence in locality not stated.											
Duration of residence in major civil division not stated .....											
Resident in locality less than 1 year.....											
Resident in locality 1-4 years.....											
Resident in locality 5-9 years.....											
Duration of residence in locality not stated											
Not stated whether resident in major civil division since birth.....											
Resident in locality less than 1 year.....											
Resident in locality 1-4 years.....											
Resident in locality 5-9 years.....											
Resident in locality 10 or more years.....											
Duration of residence in locality not stated											
Transient or visitor <sup>b</sup> .....											
Not stated whether resident, transient or visitor <sup>b</sup>											
<i>Male</i>											
(as for <i>Both sexes</i> )											
<i>Female</i>											
(as for <i>Both sexes</i> )											

<sup>a</sup> (a) Total country, (b) major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b).

<sup>b</sup> This category is needed only if the tabulation is prepared on the basis of the population found in each area at the time of the census; it is not required if the tabulation is based on the resident population of each area.

(31) POPULATION BY PLACE OF USUAL RESIDENCE, PLACE OF PREVIOUS RESIDENCE AND SEX (Other useful)

Population included: total population.

Classifications:

- (a) *Geographic division*: total country.
- (b) *Place of usual residence* (paras. 258-261): each major or other civil division of the country.
- (c) *Place of previous residence* (paras. 256-257): each major or other civil division of the country,

foreign country, not stated. For persons who have always resided in the same civil division, the place of previous residence will be the same as the place of usual residence.

(d) *Sex* (para. 276): male, female.

Use of the tabulation:

This tabulation provides information on the sources and direction of migration between civil divisions. It is, therefore, useful for preparing estimates of the future population of civil divisions, which are needed for the purposes stated in the use of tabulation 30.

ILLUSTRATION 31. POPULATION BY PLACE OF USUAL RESIDENCE, PLACE OF PREVIOUS RESIDENCE AND SEX (Other useful)

Geographic division, <sup>a</sup> place of usual residence and sex	Total population	Place of previous residence					Foreign country	Not stated
		Major or other civil division A <sup>b</sup>	Major or other civil division B <sup>b</sup>	Major or other civil division Z <sup>b</sup>	.....			
<i>Both sexes</i>								
TOTAL .....								
Major or other civil division A <sup>b</sup> ..								
Major or other civil division B <sup>b</sup> ..								
Major or other civil division Z <sup>b</sup> ..								
<i>Male</i>								
(as for <i>Both sexes</i> )								
<i>Female</i>								
(as for <i>Both sexes</i> )								

<sup>a</sup> Total country.

<sup>b</sup> Name of major or other civil division.

(32) POPULATION BY COUNTRY OF CITIZENSHIP, AGE AND SEX (Other useful)

may usefully be subdivided to show persons who have attained voting age.

(e) Sex (para. 276): male, female.

Population included: total population.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division.
- (b) *Citizenship* (paras. 191-195): citizen, alien, not stated.
- (c) *Country of citizenship of aliens* (paras. 191-195): each continent, each country (within continent) which is the country of citizenship of a significant number of aliens, all other countries combined in each continent, country not stated, continent not stated.
- (d) *Age* (paras. 176-178): 0-14 years, 15-24, 25-44, 45-64, 65 and over, not stated. The age group which includes the age limit for voting

Use of the tabulation:

The most important use of these data is in connexion with the study of problems relating to the legal status and civil rights of immigrants and other non-citizen groups. In countries where all native persons are citizens by birth and naturalization is not unduly difficult, the data can be of use in the study of the rate of assimilation of the foreign-born population.

The tabulation also provides information on the national allegiance of population groups within countries and for the world and its regions. Although the data are less efficient than information on birthplace and language as possible indicators of ethnic composition, they may provide some indications for particular population groups.

In conjunction with country-of-birth statistics, they can be used to determine comparative rates of naturalization among foreign-born persons.

ILLUSTRATION 32. POPULATION BY COUNTRY OF CITIZENSHIP, AGE AND SEX  
(Other useful)

Geographic division, <sup>a</sup> continent and country of citizenship and sex	All ages	Age (in years) <sup>b</sup>					
		Under 15	15-24	25-44	45-64	65 and over	Not stated
<i>Both sexes</i>							
TOTAL .....							
Citizens .....							
Aliens .....							
Of which:							
Africa .....							
Country A <sup>c</sup> .....							
Country B <sup>c</sup> .....							
.....							
Country Z <sup>c</sup> .....							
All other countries .....							
Country not stated .....							
America, North .....							
(as above)							
America, South .....							
(as above)							
Asia .....							
(as above)							
Europe .....							
(as above)							
Oceania .....							
(as above)							
Continent not stated .....							
Not stated .....							
<i>Male</i>							
(as for <i>Both sexes</i> )							
<i>Female</i>							
(as for <i>Both sexes</i> )							

<sup>a</sup> (a) Total country, (b) each major civil division.

<sup>b</sup> The age group which includes the age limit for voting may usefully be subdivided to show persons who have attained voting age.

<sup>c</sup> Name of country.

(33) POPULATION BY MAIN SOURCE OF LIVELIHOOD, AGE AND SEX (Other useful)

(d) Sex (para. 276): male, female.

Population included: total population

Use of the tabulation:

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Main source of livelihood* (paras. 235-237): economic activity, pensions of all kinds, benefits and assistance (other than pensions), property or other investments, support by another person or persons, not stated.
- (c) *Age* (paras. 176-178): under 15 years, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated.

This tabulation furnishes information on the number and age-sex composition of the population which is primarily dependent upon other persons for economic support (even though they may have some income of their own) and those persons who are not so dependent. The data are the base for further identification of persons upon whom others are dependent for support and for the investigation of other characteristics of dependants and supporters.

If the tabulation is expanded to include information on type of activity, it can show the extent to which present or past economic activity provides the main source of livelihood for individuals and how many economically active persons actually draw their main income or support from other sources.

ILLUSTRATION 33. POPULATION BY MAIN SOURCE OF LIVELIHOOD, AGE AND SEX (Other useful)

Geographic division, <sup>a</sup> sex and age (in years)	Total	Main source of livelihood					Not stated
		Economic activity	Pensions of all kinds	Benefits and assistance (other than pensions)	Property or other investments	Support by another person or persons	
<i>Both sexes</i>							
ALL AGES .....							
Under 15 .....							
15-19 .....							
20-24 .....							
25-29 .....							
30-34 .....							
35-39 .....							
40-44 .....							
45-49 .....							
50-54 .....							
55-59 .....							
60-64 .....							
65-69 .....							
70-74 .....							
75 and over .....							
Not stated .....							
<i>Male</i>							
(as for <i>Both sexes</i> )							
<i>Female</i>							
(as for <i>Both sexes</i> )							

<sup>a</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

(34) POPULATION BY SOCIO-ECONOMIC STATUS, AGE AND SEX (Other useful)

54, 55-59, 60-64, 65-69, 70-74, 75 and over, not stated.

Population included: total population.

(d) Sex (para. 276): male, female.

Classifications:

Use of the tabulation:

- (a) *Geographic division*: (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) *Socio-economic status* (paras. 277-280): socio-economic status classification adopted by the country.
- (c) *Age* (paras. 176-178): under 15 years, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-

These data provide information on the numerical and age-sex structure of the categories of the population that are likely to be differentiated in respect of levels of living. They are the base for further investigation of other characteristics of each category, which is needed for a determination of the variables connected with socio-economic status and the formulation of policies designed to alleviate inadequate levels of living which may characterize some of the groups.

ILLUSTRATION 34. POPULATION BY SOCIO-ECONOMIC STATUS, AGE AND SEX  
(Other useful)

Geographic division, <sup>a</sup> sex and socio-economic status	All ages	Age (in years)							
		Under 15	15-19	20-24	25-29	.....	70-74	75 and over	Not stated
<i>Both sexes</i>									
TOTAL .....									
[Socio-economic status classification adopted by the country].....									
<i>Male</i>									
(as for <i>Both sexes</i> )									
<i>Female</i>									
(as for <i>Both sexes</i> )									

<sup>a</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

(35) POPULATION WHICH HAS SUCCESSFULLY COMPLETED A COURSE OF STUDY AT THE THIRD LEVEL OF EDUCATION BY EDUCATIONAL QUALIFICATIONS, AGE AND SEX (Other useful)

(c) *Age* (paras. 176-178): under 20 years, 20-24, 25-34, 35-44, 45-54, 55-64, 65 and over, not stated.

(d) *Sex* (para. 276): male, female.

*Population included*: all persons who have successfully completed a course of study at the third level of education.

*Use of the tabulation*:

This tabulation supplements tabulation 23 by providing an important indicator of the nature of the skilled manpower available in the country. It allows estimates to be made of the stock and expected inflow of skilled manpower in different fields, for comparison with the skilled manpower needs of various sectors of the economy.

*Classifications*:

- (a) *Geographic division*: (i) total country, (ii) each major civil division.
- (b) *Educational qualifications* (paras. 209-212): highest degree, diploma, certificate etc., acquired and field of study (e.g., humanities, education, fine arts, law, social sciences, natural sciences, engineering, medical science, agriculture, not stated).

The addition to the tabulation of a classification by occupation would furnish a useful supplement to tabulation 26 by making available information on the extent to which specific skills are being utilized in the economic structure.

ILLUSTRATION 35. POPULATION WHICH HAS SUCCESSFULLY COMPLETED A COURSE OF STUDY AT THE THIRD LEVEL OF EDUCATION BY EDUCATIONAL QUALIFICATIONS, AGE AND SEX

(Other useful)

<i>Geographic division,<sup>a</sup> sex and educational qualification</i>	<i>Total population which has successfully completed a course of study at the third level</i>	<i>Age (in years)</i>							
		<i>Under 20</i>	<i>20-24</i>	<i>25-34</i>	<i>35-44</i>	<i>45-54</i>	<i>55-64</i>	<i>65 and over</i>	<i>Not stated</i>
ALL FIELDS OF STUDY.....									
[Classification of degrees, diplomas, certificates etc. adopted by the country].....									
Humanities <sup>b</sup> .....									
(as for all fields of study)									
Education <sup>b</sup> .....									
(as for all fields of study)									
Fine arts <sup>b</sup> .....									
(as for all fields of study)									
Law <sup>b</sup> .....									
(as for all fields of study)									
Social sciences <sup>b</sup> .....									
(as for all fields of study)									
Natural sciences <sup>b</sup> .....									
(as for all fields of study)									
Engineering <sup>b</sup> .....									
(as for all fields of study)									
Medical science <sup>b</sup> .....									
(as for all fields of study)									
Agriculture <sup>b</sup> .....									
(as for all fields of study)									
Not stated .....									
(as for all fields of study)									
Male									
(as for <i>Both sexes</i> )									
Female									
(as for <i>Both sexes</i> )									
Both sexes									

<sup>a</sup> (a) Total country, (b) each major civil division.

<sup>b</sup> The fields of study listed here are intended only as an aid to countries in establishing their own classification.

(36) POPULATION BY NATIONAL AND/OR ETHNIC GROUP, AGE AND SEX (Other useful)

(d) Sex (para. 276) : male, female.

Population included: total population.

Use of the tabulation:

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division.
- (b) *National and/or ethnic group* (paras. 245-246): each group for which separate information is required, all others, not stated.
- (c) *Age* (paras. 176-178): under 5 years, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75 and over, not stated.

For countries which are not ethnically homogeneous, this tabulation provides the basic information for a quantitative assessment of the relative size and age-sex distribution of the different national and/or ethnic groups. These data are the base for further investigation of other characteristics of each group, which is needed for a determination of the variables connected with ethnic affiliation and the formulation of policies designed to alleviate the social and economic handicaps affecting some of the groups.

ILLUSTRATION 36. POPULATION BY NATIONAL AND/OR ETHNIC GROUP, AGE AND SEX  
(Other useful)

Geographic division, <sup>a</sup> sex and ethnic group	All ages	Age (in years)						
		Under 5	5-14	15-24	.....	65-74	75 and over	Not stated
<i>Both sexes</i>								
TOTAL .....								
[Each national and/or ethnic group for which separate in- formation is required] .....								
All others .....								
Not stated .....								
<i>Male</i>								
(as for <i>Both sexes</i> )								
<i>Female</i>								
(as for <i>Both sexes</i> )								

<sup>a</sup> (a) Total country, (b) each major civil division.

(37) POPULATION BY RELIGION, AGE AND SEX (Other useful)

24, 25-34, 35-44, 45-54, 55-64, 65-74, 75 and over, not stated.

Population included: total population.

(d) Sex (para. 276): male, female.

Classifications:

Use of the tabulation:

- (a) *Geographic division*: (i) total country, (ii) each major civil division.
- (b) *Religion* (paras. 271-273): each religion (and sect, if desired) of significance in the country, all others, no religion, not stated.
- (c) *Age* (paras. 176-178): under 5 years, 5-14, 15-

This tabulation provides the basic information for a quantitative assessment of the relative size and age-sex distribution of the different religious groups in a country. For countries where there are significant differences in economic and social characteristics among persons of different religions, the data are useful for further investigation of the interrelationship between these characteristics and religious belief or affiliation.

ILLUSTRATION 37. POPULATION BY RELIGION, AGE AND SEX  
(Other useful)

Geographic division, <sup>a</sup> sex and religion	All ages	Age (in years)						
		Under 5	5-14	15-24	.....	65-74	75 and over	Not stated
<i>Both sexes</i>								
TOTAL .....								
[Each religion (and sect, if desired) of significance in the country] .....								
All others .....								
No religion .....								
Not stated .....								
<i>Male</i>								
(as for <i>Both sexes</i> )								
<i>Female</i>								
(as for <i>Both sexes</i> )								

<sup>a</sup> (a) Total country, (b) each major civil division.

(38) POPULATION BY LANGUAGE (MOTHER TONGUE, USUAL LANGUAGE OR ABILITY TO SPEAK ONE OR MORE LANGUAGES), AGE AND SEX (Other useful)

Population included: total population.

Classifications:

- (a) *Geographic division*: (i) total country, (ii) each major civil division, (iii) each principal locality.
- (b) *Language* (paras. 224-227): each language or combination of languages for which separate information is required, all others, not stated.
- (c) *Age* (paras. 176-178): under 5 years, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75 and over, not stated.
- (d) *Sex* (para. 276): male, female.

Use of the tabulation:

Data on mother tongue are useful as an index to national and/or ethnic group, which is often reflected

in the mother tongue of individuals long after assimilation to other customs of the majority of the population of a country has taken place.

Data on usual language provide a measure of the linguistic homogeneity or differences in the population. When combined with data on place of birth, they are particularly useful in the study of rates of assimilation of the foreign-born population, which can indicate the possible need for measures to encourage such assimilation.

Information on ability to speak one or more designated languages is needed in connexion with problems of communicating with and educating linguistic minorities. Such data are especially important in countries where more than one official language is recognized and decisions must be taken about the language to be used in schools, in official communications etc.

Tabulation of persons unable to speak the official language of the country, according to their usual language, is particularly useful in connexion with planning for teaching the official language of the country to linguistic minorities.

ILLUSTRATION 38. POPULATION BY LANGUAGE (MOTHER TONGUE, USUAL LANGUAGE OR ABILITY TO SPEAK ONE OR MORE LANGUAGES), AGE AND SEX  
(Other useful)

Geographic division, <sup>a</sup> sex and language	All ages	Age (in years)						
		Under 5	5-14	15-24	.....	65-74	75 and over	Not stated
<i>Both sexes</i>								
TOTAL .....								
[Each language or combination of languages for which separate information is required] .....								
All others .....								
Not stated .....								
<i>Male</i>								
(as for <i>Both sexes</i> )								
<i>Female</i>								
(as for <i>Both sexes</i> )								

<sup>a</sup> (a) Total country, (b) each major civil division, (c) each principal locality.

(39) FEMALE POPULATION 15 YEARS OF AGE AND OVER, IN FIRST MARRIAGE, BY AGE AT MARRIAGE, DURATION OF MARRIAGE AND NUMBER CHILDREN BORN ALIVE (Other useful)

188): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and over, not stated, and, separately, the aggregate number of children born alive to women in each category of age at marriage belonging to each category of duration of marriage.

Population included: female population 15 years of age and over, in first marriage.

Use of the tabulation:

Classifications:

- (a) Geographic division: (i) total country, (ii) each major civil division. Distinguish urban and rural for (i) and (ii) (paras. 298-299).
- (b) Age at marriage (paras. 179-183): under 15 years, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50 and over, not stated.
- (c) Duration of marriage (paras. 179-183): less than 1 year, 1, 2 ... single years to 14, 15-19, 20-24, 25-29, 30 and over, not stated.
- (d) Number of children born alive (paras. 184-

This tabulation provides, for women in their first marriage, the data needed for computing all the measures of fertility described in connexion with the use of tabulation 27. The addition of data on age at marriage and on duration of marriage makes it possible to analyse the relationship between these two variables and the fertility patterns of women in their first marriage.

In countries where most births are legitimate, the tabulation is particularly useful for studies of trends in legitimate births, in association with information derived from current civil registration of births, because of the information it provides on years of exposure to the risk of pregnancy.

ILLUSTRATION 39. FEMALE POPULATION 15 YEARS OF AGE AND OVER, IN FIRST MARRIAGE, BY AGE AT MARRIAGE, DURATION OF MARRIAGE AND NUMBER OF CHILDREN BORN ALIVE

(Other useful)

Geographic division, <sup>a</sup> age at marriage (in years) and duration of marriage (in years)	Total females in first marriage	Females in their first marriage with indicated number of children born alive						Number of children born alive
		0	1	2	.....	10 and over	Not stated	
<i>All ages at marriage</i>								
ALL DURATIONS .....								
Less than 1 year .....								
1 .....								
2 .....								
.....								
14 .....								
15-19 .....								
20-24 .....								
25-29 .....								
30 and over .....								
Not stated .....								
<i>Under 15 at marriage</i>								
(as for <i>All ages at marriage</i> )								
15-19 at marriage								
(as for <i>All ages at marriage</i> )								
20-24 at marriage								
(as for <i>All ages at marriage</i> )								
25-29 at marriage								
(as for <i>All ages at marriage</i> )								
30-34 at marriage								
(as for <i>All ages at marriage</i> )								
35-39 at marriage								
(as for <i>All ages at marriage</i> )								
40-44 at marriage								
(as for <i>All ages at marriage</i> )								
45-49 at marriage								
(as for <i>All ages at marriage</i> )								
50 and over at marriage								
(as for <i>All ages at marriage</i> )								
Age at marriage not stated								
(as for <i>All ages at marriage</i> )								

<sup>a</sup> (a) Total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

## Annex

### BASIC TOPICS INCLUDED IN REGIONAL PROGRAMMES FOR THE 1970 POPULATION CENSUSES

("x" indicates that the topic has been included as basic in the given regional programme,  
"–" that it has not been included as basic)

<i>topics in the world programme Recommended and other useful</i>	<i>Topics included as basic in regional programme of</i>			
	<i>Conference of African Statisticians</i>	<i>Conference of Asian Statisticians</i>	<i>Conference of European Statisticians</i>	<i>Committee on Improvement of National Statistics (COINS) of Inter-American Statistical Institute</i>
<i>Geographic characteristics</i>				
*Place where found at time of census and/or	} x <sup>a</sup>	x	x <sup>b</sup>	x
*Place of usual residence				
*Place of birth.....	x	x	x <sup>c</sup>	x
Duration of residence.....	–	x	–	x
Place of previous residence.....	–	–	x <sup>d</sup>	x
Place of work.....	–	–	x	–
*Total population (derived).....	x	x	x	x
*Locality (derived).....	x	x	x	x
*Urban and rural (derived).....	x	x	x	x
<i>Personal and household characteristics</i>				
*Sex.....	x	x	x	x
*Age.....	x	x	x	x
*Relationship to head of household...	x	x <sup>e</sup>	x	x
Relationship to head of family.....	–	x <sup>e</sup>	x	–
*Marital status.....	x	x	x	x
Age at marriage.....	–	–	x <sup>f</sup>	–
Duration of marriage.....	–	–	x <sup>f</sup>	–
Marriage order.....	–	–	x <sup>g</sup>	–
*Children born alive.....	x	x	x <sup>h</sup>	x
*Children living.....	x	x	–	–
Citizenship.....	i	–	x <sup>e</sup>	–
*Literacy.....	x	x	–	x
*School attendance.....	x	x	–	x
*Educational attainment.....	x	x	x <sup>j</sup>	x
Educational qualifications.....	–	–	x <sup>j</sup>	–
National and/or ethnic group.....	x <sup>i</sup>	k	–	–
Language.....	–	x <sup>k</sup>	–	–
Religion.....	–	x	–	–
*Household composition (derived)....	x	x <sup>l</sup>	x	x
Family composition (derived).....	–	x <sup>l</sup>	x	–

**Annex (continued)**

<i>Recommended and other useful topics in the world programme</i>	<i>Topics included as basic in regional programme of</i>			
	<i>Conference of African Statisticians</i>	<i>Conference of Asian Statisticians</i>	<i>Conference of European Statisticians</i>	<i>Committee on Improvement of National Statistics (COINS) of Inter-American Statistical Institute</i>
<i>Economic characteristics</i>				
*Type of activity.....	x	x	x	x
*Occupation .....	x	x	x	x
*Industry .....	x	x	x	x
*Status (as employer, employee etc.)..	x	x	x	x
Main source of livelihood.....	-	-	x	-
Socio-economic status (derived).....	-	-	x	-
Dependency (derived).....	-	-	x	-

<sup>a</sup> The recommended topic is "place where found at time of census" but it is recognized that some countries will instead investigate "place of usual residence".

<sup>b</sup> The recommended topic is "place of usual residence".

<sup>c</sup> The recommended topic is "country of birth and/or citizenship".

<sup>d</sup> The recommended topic is "place of residence at prior reference date".

<sup>e</sup> The recommended topic is "relationship to head of household or family".

<sup>f</sup> The recommended topic is "year (or duration) of current marriage".

<sup>g</sup> The recommended topic is "whether current marriage is first marriage or not".

<sup>h</sup> The recommended topic is "total number of children born alive to ever-married women".

<sup>i</sup> The recommended topic is "national and/or ethnic group" but it is recognized that some countries will instead investigate "citizenship".

<sup>j</sup> The recommended topic is "educational attainment and/or educational qualifications".

<sup>k</sup> "Language" is recommended as the most appropriate indicator of "national and/or ethnic group" for the countries of the region.

<sup>l</sup> The recommended topic is "relationship to head of household or family".

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