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PRINCIPLES AND RECOMMENDATIONS FOR A POPULATION CENSUS: DRAFT
RECOMMENDATIONS FOR THE 1970 CENSUSES

(Report by the Secretary-General)

BACKGROUND

1. At its twelfth session, the Statistical Commission requested the Secretary-General "...to proceed with the examination now under way of the experience of countries in connexion with population and housing censuses held during 1955-1964 and report to the Commission at its next session".^{1/} The Secretary-General has gone a step further than the request of the Statistical Commission, in that the results of the investigation called for have been applied to the revision of the Principles and Recommendations for National Population Censuses^{2/} which comprised the United Nations standards for the 1960 population censuses.

The attached provisional draft of Principles and Recommendations for a Population Census (Document E/CN.9/200/Annex) is the first step in that proposed revision, which is one of the United Nations activities in the 1970 World Population Census Programme, reported on in document E/CN.3/337.

^{1/} Official Records of the Economic and Social Council: Thirty-fourth Session, Supplement No. 13, resolution 7 (XII).

^{2/} United Nations publication, Sales No.: 58.XVII.5.

2. Preparation of the revision was accelerated because of the delay in convening the thirteenth session of the Statistical Commission and the need to have a draft provisional revision of the Principles and Recommendations for the consideration of the Population Commission and the Statistical Commission at their thirteenth sessions. It is believed that this procedure is in line with the emphasis placed by the Statistical Commission on "the importance of ensuring that final recommendations, training materials and technical assistance for the 1970 censuses of population and housing would be available when needed by the countries...".^{3/} With the present time table (see E/CN.3/337), it is anticipated that a second revision of the Principles and Recommendations might be ready for the consideration of the Statistical Commission at its fourteenth session.
3. The present document was considered by the Population Commission at its thirteenth session (E/CN.9/200) and its comments and suggestions are reported in document E/CN.3/331.

ACTION BY THE COMMISSION

4. Should the Commission consider that the present document provides a suitable basis for developing recommendations covering the 1970 censuses of population, it may wish to request the Secretary-General to:
- (a) circulate the draft 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;
 - (b) revise the draft to take into account the suggestions of the Statistical Commission and the Population Commission as well as the comments received as a result of the action taken in accordance with (a);
 - (c) convene a small group of experts in population censuses to examine the revised draft prior to the fourteenth session of the Statistical Commission and to recommend such changes as they deem necessary; and
 - (d) present the revised draft, together with any recommendations of the group of experts, for consideration at the fourteenth session of the Statistical Commission.

^{3/} Official Records of the Economic and Social Council: Thirty-fourth Session, Supplement No. 13, resolution 7 (XII).

BASIS FOR DRAFT

5. The present draft takes into account 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^{4/} and the Inter-American Statistical Institute,^{5/} 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.
6. 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 Conference of European Statisticians, the Conference of Asian Statisticians, and their respective Working Groups on Censuses of Population and Housing.^{6/}
7. 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 are in the course of being formulated by the Inter-American Statistical Institute,^{7/} the Economic Commission for Asia and the Far East^{8/} and the

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- ^{4/} Methods and Problems of African Population Censuses and Surveys (preliminary draft of document to be presented to the fourth Conference of African Statisticians); Analysis of National Replies to the Questionnaire on Censuses of Population and Housing. Part One. General Questions and Questions Relating to Population Censuses (United Nations document 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 (United Nations document E/CN.11/ASTAT/CPH/L.1).
- ^{5/} Program of the 1960 Census of America. III. Censuses Taken. A. Social Cycle. 2 Topics, Concepts, Classifications and Tabulations. a. Population (document 4938a).
- ^{6/} United Nations documents Conf.Eur.Stats/221, E/CN.11/686, Conf.Eur.Stats/WG.6/97 and E/CN.11/ASTAT/Conf.6/L.10.
- ^{7/} Conclusions of the VIII Session of COINS.I. Inter-American Program of Basic Statistics (document 4921a).
- ^{8/} Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East (United Nations document E/CN.11/ASTAT/Conf.6/L.4).

Economic Commission for Africa.^{9/} In revising 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.^{10/}

8. 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.^{11/} Much of the description of the uses of the recommended tabulations, set forth in Part VI of the draft Principles and Recommendations, has been drawn from that publication.

9. Finally, consideration has been given to the census tabulations which provide indicators of the level of living or basic information necessary for the interpretation of the level of living.^{12/}

10. Certain topics, such as total population, locality, urban-rural, household, family, economically active population, educational attainment and main source of livelihood, are still under active consideration in one or more of the regions. It is expected, therefore, that changes may have to be made in the present draft to take into account the final regional points of view on these topics. Furthermore, there has thus far been little regional consideration of tabulations. Developments in this respect will also be considered in the preparation of the next draft.

11. It will be noted that Part VI of the draft Principles and Recommendations includes specifications for each tabulation recommended; it is expected that, in addition to the outline of specifications shown in the present draft, the next draft will include also a sketch table for each tabulation, illustrative of the required attribute classifications.

9/ "Statistical Development in Africa", a draft revision of Use of the Revised List of Basic Statistics for Programming Statistical Development in Africa (United Nations document E/CN.14/CAS.3/9).

10/ United Nations publication, Sales No.: 59.XVII.10.

11/ United Nations publication, Sales No.: 64.XIII.4.

12/ International Definition and Measurement of Levels of Living. An Interim Guide (United Nations publication, Sales No.: 61.IV.7).

12. Along with each set of specifications in Part VI, supplementary information has been included which is intended only for the convenience of the Commission in its consideration of each recommended tabulation and its specifications. This information has been set apart from the remainder of the draft text by the use of brackets and is not intended to form part of the Principles and Recommendations. Included are references to, inter alia, the Program of the 1960 Census of America (COTA-1960),^{13/} the 1960 European Programme for National Population Censuses,^{14/} the Inter-American Program of Basic Statistics,^{15/} and Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East.^{16/}

^{13/} Inter-American Statistical Institute. Program of the 1960 Census of America (COTA-1960). Report on the VI Session of COINS, Buenos Aires, November 17-28, 1958, (document 3841a (COINS)).

^{14/} United Nations document Conf.Eur.Stats/WG.6/81.

^{15/} Conclusions of the VIII Session of COINS, op. cit.

^{16/} Op. cit.

ANNEX

ANNEX

PRINCIPLES AND RECOMMENDATIONS FOR A POPULATION CENSUS:
DRAFT RECOMMENDATIONS FOR THE 1970 CENSUSES

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INTRODUCTION

1. The purpose of a population census is primarily to satisfy certain national needs for statistical data and those needs are the major factors in determining the contents of the census. Both the contents 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 this document are to meet these requirements and also to stress the need for the collection and tabulation of those data which are required for demographic research and for formulating programmes in population policy, housing, health, manpower, education, food and nutrition and so forth. It also stresses 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 up the release of census results.
3. The document is composed of six parts. Part I is concerned with the definition, value and essential features 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.
4. 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. These recommendations have as their objective increasing the value of the compiled results for national purposes and improving international comparability.

5. Since neither the general administrative 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 statements. While somewhat different in purpose, both the principles and the recommendations are an expression of tested census practices in so far as these can be stated in general terms for world-wide application.

6. Both the principles and the recommendations are applicable to national censuses of sovereign and non-sovereign countries and also to censuses at a sub-national level. A guide to their implementation is provided in the Handbook of Population Census Methods,^{1/} in which both the principles and the recommendations are discussed in greater detail.

^{1/} Handbook of Population Census Methods: Vol. I, General Aspects of 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)). It is likely that there will be a future revision of the publication.

Part I. DEFINITION, VALUE AND ESSENTIAL FEATURES OF A POPULATION CENSUS

A. Definition of a population census

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

B. Value of a population census

8. The population census is a statistical operation of great value to every country as part of a continuing programme of data collection. It is the primary source of basic national population data required for administrative purposes and for many aspects of economic and social planning. The census provides a base or benchmark for current statistics and a statistical frame for sample surveys.

9. 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 which is the demarcation of constituencies and allocation of representation on governing bodies. Certain aspects of the legal or administrative status of territorial divisions may also depend on the size of their populations.

10. Information on the location of the population, its size and its other characteristics is essential to the study and evaluation of economic and social problems and the determination of policy affecting economic and social development. Consideration of questions of employment, migration, housing, education, public health and welfare, 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 administrative divisions.

11. Census data are the base for the computation of vital rates for the many different types of areas within a country for which health programming, for example, is required.

12. Reliable estimates of the future size, distribution and other characteristics of the population of the total country and sub-national areas cannot be made without knowledge of its present characteristics time-adjusted by accurate vital statistics.

13. In addition to specific administrative uses, the population census provides indispensable data for scientific analysis and appraisal of the composition, distribution and growth of the population. The changing patterns of urban-rural concentration, the development of urbanized areas, the geographic distribution of the population according to different variables such as occupation and education, the evolution of the age structure of the population, and the mortality and natality differentials for various population groups, are questions of scientific interest and research, the importance of which extends beyond the academic to practical problems of industrial and commercial growth and management.

14. The census has many important uses for individuals and private institutions in business and industrial planning, who are in frequent need of data on the characteristics of the population in the sub-national areas which they serve.

C. Essential features of a population census

15. The essential features of a population census are individuality, universality within a defined territory, simultaneity, periodicity, and the compilation, evaluation, analysis and publication of the data.

(1) Individuality

16. A census implies that each individual is identified separately. The characteristics of each person in the total population, or in a representative sample of the total population, are also separately recorded. Only by this procedure can the various characteristics of an individual (e.g., age, literacy, occupation) be considered simultaneously. A procedure by which aggregated or summarized data on individual characteristics are recorded for groups of persons is not a census in the strict sense of the term because it precludes the cross-classification of data on several characteristics.

17. Individuality does not preclude the use of sampling techniques for obtaining data on specified characteristics, 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

18. The census should cover a precisely defined territory (e.g., the entire country or a well-defined part of it) and should include every member of the community within its scope, without omission or duplication.

(3) Simultaneity

19. Each person should be enumerated as nearly as possible at the same well-defined point of time and the data collected should refer to a well-defined point or period of time. The time-reference period need not, however, be identical for all of the data collected. In most cases, it will be the day of the census; in some instances, economic characteristics, for example, it may be a brief period just prior to the census.

20. Where the amount of time required for the enumeration is excessively long and the population is not likely to be able to supply accurate information on its characteristics as of a single point of time in the past, it may be necessary to use different points of time in the enumeration, even to the extent of using the day of the enumeration of each household. If such a procedure is followed for all parts of the population, it should be clearly explained in the census reports and the total duration of the enumeration should be given. In addition, it would be useful to have a single date in the enumeration period designated as the "census date" for ease of reference and for the computation of intercensal indices.

(4) Periodicity

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

22. It is recommended that every country develop a programme of data collection which will provide that a national population census be taken every ten years.

(5) Compilation, evaluation, analysis and publication of data

23. A census is not complete until the information collected is made available to potential users in the form most suitable to their needs. Hence, the data must be compiled by appropriate geographic areas and by useful demographic variables,

their accuracy must be evaluated and their significance must be analysed. The tabulations required by most potential users should be published so that they are readily accessible. Tabulations which are required by only a few users, such as certain government officers or specialized research organizations, need not be published but can be supplied directly to them. 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.

D. International simultaneity

24. The census of any country is of greater value nationally, regionally and internationally if it can be compared with censuses of other countries which were taken at approximately the same time.

25. It is obvious 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, such national factors, or a long-established tradition for a definite census year, should be given greater weight than the desirability for international simultaneity.

26. It is, however, recommended that whenever possible each country undertake a population census in the years ending in "0" or as near to those years as feasible.

E. The role of the population census in an integrated programme of data collection

27. The decennial population census is only one tool for the collection of the data which modern countries need for administrative and other purposes. Its relationship to other statistical investigations in an integrated programme of data collection should be considered when census planning begins, so that the necessary provisions can be made for facilitating the use of the population census in connexion with intercensal sample surveys, with continuous population registers, with other types of censuses, and with civil registration and vital statistics.

(1) Relationship to intercensal sample surveys

28. The rapidity of current changes in the size and other characteristics of populations and the need for additional detailed data on social and economic characteristics which are not appropriate for collection in a full-scale census,

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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.

29. The census can provide the frame for scientific sample design in connexion with such surveys; at the same time, it provides the regular benchmark data with which their results can be compared, thus providing a check on the results of the surveys and also a base against which change in the investigated characteristics can be measured. To facilitate comparability of census and survey results, the definitions and classifications employed should be as identical as possible in the two types of investigations.

(2) Relationship to continuous population registers

30. A population census is often used as the starting point for the establishment of a continuous population register. Results of subsequent censuses can be compared with register data as a check on the accuracy of both sources. Information from each source can be transferred to the other, as required, after appropriate investigation of apparent discrepancies.

(3) Relationship to other types of censuses

31. Certain information collected as part of a population census, or incidental to it, can be most useful in subsequent housing, agricultural or establishment censuses.

(a) Census of housing

32. 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 independently of each other.

33. There are essential aspects of each census which are common to both. It is an essential part of the population census to identify or list each housing unit, and it is an essential part of the housing census to gather information on the number of occupants in each housing unit and their characteristics. It is therefore necessary that the concepts and classifications common to both censuses should be consistent.

34. In many countries, the population and housing censuses are taken concurrently, often with the use of a single schedule. This technique provides for ready matching of location, head of household and other identifying characteristics of the housing unit occupants. It also makes it possible to relate to the housing census data the information on demographic and economic characteristics of each household which is collected in the population census; if this information cannot be taken from the population census, it has to be collected anew in the housing census.

35. These 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 collected on a sample basis only, either concurrently with, or immediately following, the full enumeration.

(b) Census of agriculture

36. Information on the size of agricultural holdings and on land tenure, which can suitably be collected in a population census, can be utilized in the establishment of a frame for sampling in the agricultural census. In addition, the population census can readily identify the population engaged in agriculture.

(c) Census of establishments

37. Listings of industrial and commercial establishments for use in a census of establishments can be prepared during the course of the population investigation, as enumerators check each building to see if there are any persons using it as a dwelling place.

(4) Use in connexion with civil registration and vital statistics

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

39. If procedures for the collection of census data, vital statistics and migration statistics are co-ordinated with regard to coverage, definitions, classifications and tabulations, it is feasible to make the fullest possible complementary use of information from all these sources in quality evaluation and projections of population.

40. Furthermore, it may be found expeditious to make arrangements in connexion with the census plans to investigate the completeness and accuracy with which births are being registered by checking the infants under one year of age enumerated against the corresponding birth register. The same procedure may also yield an estimate of under-registration of infants in the census.^{2/}

^{2/} See Handbook of Vital Statistics Methods (United Nations publication, Sales No.: 55.XVII.1), chapter XIV.

Part II. PLANNING, ORGANIZATION AND ADMINISTRATION OF A POPULATION CENSUS

41. The careful planning of a census is of prime importance both for statistically advanced countries and for those with less statistical experience. A census is a complete operation in itself, 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.

A. Elements of census plan

42. All censuses cannot 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) the enumeration, (c) tabulation, (d) post-enumeration checks of the accuracy of the data, (e) analysis of the results, (f) dissemination of results, and (g) systematization of census experience. It will be readily apparent that these phases are not entirely mutually exclusive. For example, the post-enumeration checks may be undertaken at the same time as the tabulation of the results of the regular enumeration. Furthermore, certain elements which are discussed under "Preparatory work", such as the budget, may have to be amended according to circumstances which arise at a later stage of operation. In addition, the systematization of census experience should start with the beginning of the preparatory work and continue through all the subsequent phases.

43. 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

B. Preparatory work

(1) Legal basis for a census

44. Legal authority for the census is required for fixing primary administrative responsibility, obtaining the necessary funds, determining the general scope and timing of the census and placing upon the public a legal obligation to co-operate.

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In countries lacking permanent legal authority for the taking of periodic censuses, it is important to act early in establishing ad hoc legal authority or, preferably, legislation calling for a system of periodic censuses.

45. 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. 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

46. 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. Even so, it is inevitable that some items of cost will be overlooked or incorrectly estimated. In addition, 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 but, on the other hand, the reserve for contingency should be kept small by working out as precisely as possible the volume, rates and cost of each operation in the different sections of the job.

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(3) Census calendar

47. A valuable aid in the planning of a census is the use of a calendar or timetable indicating the sequence and estimated duration of each of the component operations of the census. It is important to prepare the calendar at the early stages of census planning and to revise it continually as the planning and operation of the census proceed.

48. Such calendars are useful since they indicate the dates on which each of the numerous operations which make up a census are to be started and completed, and serve as a guide to measure the progress of each stage of the census operation. Serious delays in work, or errors in time estimates, can be detected. 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.

49. 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.

(4) Administrative organization

50. 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. There are definite advantages in the existence of a continuing office 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. Usually the field organization is directed from the central census office during the preparatory work as well as during the conduct of the enumeration. In order to provide immediate supervision

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in each area, field offices at various levels are needed for the later part of the preparatory work and 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.

52. Subsequent to the enumeration, the census organization can be 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.

53. National, provincial and local commissions and committees frequently may be very useful in planning and preparing a census. Such bodies may be composed of representatives of governmental agencies and of non-governmental users of the census data. It is important, however, that their promotional and advisory functions be well defined so as not to conflict with the responsibilities of the executive agency. For example, over-generous acceptance of items suggested for inclusion in the census might seriously jeopardize its successful completion. In such a case, executive restraint would have to be exercised.

(5) Cartographic (mapping) work

54. The determination, for the purpose of the census, of the national and internal boundaries of the territory and its detailed sub-division 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 should be utilized and new maps prepared as required.

55. 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.

56. In areas for which detailed mapping is not feasible, or as a supplementary method of identifying small areas, a systematic and complete listing of localities may be used.

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(6) Housing-unit and household listing

57. The listing of housing units, and even of the households in each housing unit, prior to the enumeration, is useful to the control of the enumeration if each enumerator must account for each housing unit and household listed. Such a pre-listing can also be utilized for obtaining estimates of the population in each household.

58. A complete listing of housing units, particularly in densely settled places, cannot be accomplished unless streets have names and housing units have permanent numbers. Where these prerequisites do not exist, a pre-numbering for census purposes makes a listing possible. Consideration should be given to providing permanent numbering, which can be used for successive censuses and for other purposes.

(7) Tabulation programme

59. 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 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 kind and amount of data it is possible to collect, while the data processing method to be used will determine the number and complexity of the tabulations which can be accomplished within a reasonable time. The final programme should be ready in time for preparation of the questionnaires well before the enumeration date.

60. 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. If, however, during the processing stage some of the data collected prove to be highly inaccurate, it may be preferable to modify the tabulation programme at this point, rather than produce tabulations of questionable value.

(8) Questionnaire preparation

61. 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 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.

62. The method of enumeration (see paras. 69-70) governs to some extent the type (i.e., single individual; single household or single housing unit; multiple household or multiple housing unit) 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 closely related to the final contents, form and arrangement of the questionnaires.

63. Consideration of questionnaire design should begin at the same time as the consideration of the tabulation programme, since the feasibility of the tabulation programme is to some extent decided by the limitations imposed by the questionnaire. The final questionnaire must be ready in sufficient time for proper training of census officials and for adequate publicity on its contents and to allow for any delays in printing.

(9) Census tests

64. The testing of various aspects of a census plan prior to the enumeration is a very useful practice. Census tests can be designed for different purposes and in different ways. They can give important information on the adequacy of the field organization, the training programme and other important aspects of the census plan. They are particularly valuable to test for weaknesses in the questionnaire, instructions or enumeration procedures which might affect the quality of the data. Census tests serve as practical training for the nuclear staff of supervisors and other officials. They can be designed to provide information on methods of enumeration and on the average time required for enumerating a single household, which information is useful in estimating the staff required. To yield full benefits, tests should be employed for all stages of the census, including collection, processing and examination of results.

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(10) Plan of enumeration

65. The complete enumeration plan should be prepared well before the enumeration begins. This involves (a) the determination of the enumeration method (see paras. 69-70) to be used 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 the number of enumerators needed can be properly ascertained.

(11) Plans for data processing

66. 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. In fact, 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 period for acquisition of machines, training of personnel and programming the operation. This is particularly important if electronic data processing is to be used because of the complicated nature of the required programming.

(12) Publicity

67. The publicity for the census is one 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 reason 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

68. 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, computers, 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 recruited on the basis of competence. Consideration might be given to the usefulness of an in-service training programme covering each phase of the work and, wherever feasible, to the utilization of the same staff for successive operations. Such training should correspond closely to the needs of the various operations and, where appropriate, may include both theoretical and practical instruction.

C. Enumeration

(1) Method of enumeration

69. There are two major methods of enumeration. In the canvasser 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.

70. 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) Enumeration period

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

(3) Supervision

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

(4) Use of sampling in the enumeration

73. Sampling may be employed in the enumeration for collecting information on all topics which need not be tabulated for small areas, or its use may be restricted to those topics on which data are difficult to collect and hence require careful questioning. Questions designated 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 (see Part III).

D. Data processing

74. 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

75. The choice of an appropriate method of processing is dependent upon the circumstances of each country. The recent rapid advances in electronic data processing techniques have made this method most attractive to many countries, in spite of the costs of purchasing or renting equipment, the problems of transportation and servicing in remote areas, and the difficulties of securing an adequately trained staff of operators. At the same time, new possibilities for data processing at special international centres appear to be developing.

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76. In considering 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 Government, of which the population census may be only a small part, just as the census is only one part of a continuous programme of data collection. Only on this basis can a reasonable decision be arrived at.

77. [Deleted]

(2) 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 detailed discussion of the latter technique, see Part III.)

80. [Deleted]

(3) Advance and final tabulations

81. 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 specified topics. These are usually based on a small sample of the raw data and may be issued as provisional results.

82. Final tabulations may be on a 100 per cent basis or they may also be based, as are advance tabulations, on only a sample of the data collected (see Part III).

E. Evaluation of results

83. Good census practice requires a careful consideration and evaluation of the completeness and accuracy of the census results. A certain degree of omission, especially among some segments of the population, is inevitable. There will also

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be some content errors, that is mistakes in the reporting or recording of information concerning the characteristics of households or individuals.

84. 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 the results of a post-censal field check and with data on the same characteristics of the population obtained from other sources.^{3/}

85. In the final census publications, there should be a full indication of the methods used for evaluating the completeness of the data and the estimate of under-enumeration. Similarly, it is desirable to provide, so far as possible, an evaluation of the quality of the information on each topic.

F. Analysis of results

86. The preparation of 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 past census results and thus is best equipped with the information needed for preparing comparative studies which will indicate long-term trends in the phenomena investigated. Specialists in other government offices or experts outside of the Government may properly be asked to take part in drawing up a programme of studies and in carrying out the studies themselves.

87. 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 as a contribution to scientific research.

G. Dissemination of results

88. To be of value to the greatest number of the potential users of the data, census results must be published. It is important, therefore to make sure that the collection or the tabulation programme does not become so elaborate that funds for publication are diverted to the early stages of the work and the final result of

^{3/} See Handbook of Population Census Methods, Vol. I, op. cit., chapter VI, section B.

the census is a mass of material left uncompleted at various stages of processing. As noted in paragraph 23, this does not mean that all the processed material must be published. In certain cases, highly specialized information needed by only a few individuals or government agencies may be made available in other ways, and some data may not even be processed until they are required at a later date.

89. In addition, 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.

90. Note: A proposal for a United Nations data bank of 1960 national census results is set forth for the Population Commission in document E/CN.9/195, Add.1, and for the Statistical Commission in document E/CN.3/311.7

91. Every effort should be made to publish the principal results as soon as possible after the date of the enumeration; otherwise, their usefulness and the extent of public interest might be diminished.

92. It is desirable that target dates for publication be determined in advance and processing and reproduction programmes be planned accordingly. There are various methods of reproduction available which are both rapid and economical, and these should be investigated where necessary. Results should be reproduced in a legible form, but aesthetic considerations should be secondary to the necessity of making the results available as rapidly and as economically as possible.

93. It is recommended that every country consider the publication of a methodological and administrative report which would give the information necessary for appraising and interpreting the results of each census, including materials not otherwise readily available, such as specimens of the questionnaires, instructions for the enumeration, and an indication of the composition of the tabulated categories. Additional materials regarding the manner in which the census was planned, organized and conducted, which are particularly useful for census experts in the country and abroad, should include information on the cost of the census, important problems encountered at the various stages of the programme, points to be considered in future censuses, etc.

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H. Systematization of census experience

94. 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, the techniques which were successful, the failures 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

95. Sampling has 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.

96. 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. The most significant principles and recommendations in this respect are discussed in paragraphs 97-110 below. Sampling as an integral part of the census is discussed in section B.

A. Preconditions of acceptable sample operations

(1) Accuracy

97. A necessary feature of an acceptable sample plan is a statement of the precision desired in sample estimates. The higher the precision, the larger and/or the more complex the sample, and hence the more expensive. The accuracy of a properly designed sample survey can be determined, after the survey is completed, by a statistical examination of the returns. The final measure of any precision is independent of census data obtained otherwise, and is also independent of any assumption made in the planning of the sample concerning the magnitudes of the population variates.

98. Reliance can be placed on results obtained through the use of sampling methods because their reliability can be ensured through planning and execution of the sample survey. For successful execution of a scientifically designed sampling plan, it is essential that strict selection procedures be followed. The procedures must be such that a probability is assigned to every unit in the sampling population. These probabilities are needed for estimating population values and for calculating the measures of accuracy of these estimates. A further requirement of good selection procedures is that these must be simple and direct so that deviations from prescribed standards or instructions can be held to a minimum.

99. 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 makes it possible to employ interviewers of a higher calibre, which in turn should help to eliminate many of the errors in the census data.

100. If information of a certain type is needed for every person in the population, a sample is not adequate. It is generally not possible to obtain sufficiently accurate estimates for minor civil divisions or localities through sampling.

(2) Census resources

101. 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 sample plans aimed at the same objective 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 bear in mind the following factors.

102. A sample operation, as a rule, costs considerably less than a complete enumeration. Sampling, through savings in costs, makes it possible to introduce some needed improvements in the census without jeopardizing the quality of census data. Numerous factors govern the cost of a sample and it is essential that these be fully weighed before a decision is made to combine 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.

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

104. Considerable experience and skill are necessary in devising questionnaires and preparing instructions for office and field, particularly under unusual conditions.

105. Field and office staff have to be adequately trained and supervised. It is essential to ensure that the field staff thoroughly understand the field instructions before being assigned to the field.

106. Sufficient attention must be paid to tabulation procedures. The methods used for arriving at estimates of population values from the sample depend on the tabulating equipment that is available, or on the capabilities of the office staff if the work is done by hand.

107. Maps and prior census information concerning small areas are an important prerequisite of a good sample plan. Maps are particularly valuable if these 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. Inaccuracies in the prior information are not carried into the final estimates of population values. Ancillary information related to sample subjects is required for more accurate estimates based on regression and ratio methods. It can be stated in general that the better the availability of information on population of small areas, the less expensive the sample required to yield the desired precision.

(3) Sampling frame and sample units

108. The selection of sample units has to be made from some kind of a complete list of these units, namely the sampling frame. The sampling frame may be a list of small areas, structures, households, people or groups 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. 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.

109. Inaccuracy in a frame may arise not only from wrong information about the units listed in it or defined by it, but also from listing of units which are in actual fact non-existent. If some units of the material are omitted entirely, the frame is called incomplete; if some units of the material are included more than once, the frame is said to be subject to duplication. A frame used for a particular sample survey may sometimes exclude certain parts of the material which the survey is expected to cover; such a frame is called inadequate for the survey under study. A frame, though accurate, complete and free from duplication at the time it was constructed, may no longer be so at the time it is required for use. Such a frame is called obsolete and defects of the first three of the above types may be introduced through the use of an obsolete frame.

110. Each of the five types of defect in a frame introduces defects of a different type in the sample procedure. The foregoing observations point to the desirability of a careful investigation of 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. Such an object 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.

111. Although this remedy is appropriate when the frame in question is a population census already enumerated and processed, a much more effective approach toward 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.

B. Sampling as an integral part of the census

112. 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 items in addition to those for which universal coverage is required, (3) post-enumeration checks, (4) quality control of data processing, (5) tabulation of provisional results, and (6) tabulation of additional data and data required for special studies.

(1) Tests of census procedures

113. In planning a census, one is confronted with the problem of choosing among several alternative procedures. If tests are conducted on a sample basis the optimum solution can in most instances be found with a high degree of precision. Such procedures facilitate a more desirable allocation of available census resources than is possible otherwise, and thus enable any country to undertake a census programme adapted to its needs and capacities.

114. 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.

115. One of the most important features of modern sampling is that the accuracy of the results of a scientifically planned sample inquiry can be calculated in advance with a fair amount of precision, in the sense that for each figure to be estimated one can state the probable limits of error of estimation. This feature enables one to design a sample survey 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. In particular, when previous information is not available, it is often worthwhile to organize a pilot survey to obtain an estimate of variability of the important characteristics under study.

116. When carrying out census tests, it is well to remember that one does not always have to use random sampling. 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. On the other hand, when quantitative measures are needed for comparing efficiencies of different sample procedures (for instance, in examining the anticipated response errors arising from different systems of enumeration) random sampling must be used.

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

117. 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 has been used in several countries for broadening the scope of the census by asking a number of questions of only a sample of 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 use of sampling actually saves a good deal of time and money and furthermore, under certain circumstances, the sampling approach alone ensures data of acceptable accuracy.

118. An important limiting consideration (already briefly mentioned) which should be borne in mind is the following. 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.

119. Information on supplementary questions may be obtained by one of two different methods. Either the same interviewers may ask the supplementary questions, or specially trained interviewers may be engaged for enumerating the sample. The choice of a particular method depends on whether cost or accuracy is the overriding consideration in the census. The first method may be used where it is fairly simple to obtain the supplementary information by conventional enumeration techniques and where keeping low the cost of the census is the principal objective; the second method is used where ordinary enumeration methods are not expected to elicit accurate answers to the supplementary questions and where it is more important to secure reliable information than to save on census cost.

120. Although asking supplementary questions of only a sample of population may ease the burden on the responding public as a whole, if the same interviewers ask both the main as well as the supplementary questions it may overburden the interviewers and result in a deterioration of the quality of enumeration of both the main and the supplementary topics.

121. It is important to remember that asking questions which are not asked of all persons may raise legal, administrative and probably political issues since census information is required under statute and usually under penalty. In fact, if only a few persons are to be canvassed for supplementary questions, this may well be misunderstood as discriminatory.

122. The suitability of particular questions for a sample enumeration depends on the accuracy with which results are needed for small areas and population groups, and on the enumeration costs involved. It is quite possible that certain information available for larger groups may be required for small marginal groups for some future research, the need for which could not be foreseen at the time of the sample enumeration. This consideration limits the usefulness of a sample enumeration to some extent, even though information needed immediately can be provided with adequate accuracy. Account has also to be taken of the desirability of having results of high precision on basic items for areas of various sizes, since such results can serve as benchmarks for numerous inquiries. In fact, it is widely recognized that a simple complete census, even of imperfect quality, almost always constitutes the best basis for a sample inquiry.

(3) Post-enumeration checks

123. 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. However, in order to achieve reliable census data, one should make certain that departure from accuracy does not exceed reasonable limits. The errors in complete enumeration can be measured only by means of concurrent samples, scientifically designed and carefully executed by properly trained staff.

124. Census enumeration extends to every census unit in the population and involves numerous questions and 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 inexpensive and convenient way of finding out 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. Another method is to compare samples of census questionnaires with records known to be reliable, e.g., vital registration documents in some countries.

125. Post-enumeration checks serve two principal purposes. The one is to inform users of data about the accuracy attached to census figures and the other is to aid census officials in the improvement of subsequent censuses. If sample data are carefully interpreted and compared with data obtained by complete counts, inadequacies are often disclosed in complete counts as well as in samples. The ultimate benefit of the use of sampling in census work may be a refinement in both the sampling procedure and in the methods of complete enumeration and better interpretation of data.

126. As mentioned earlier (see para. 116), random sampling need be used only when precise quantitative measures are required for appraising the census data (for instance, in determining the amount of under- or over-enumeration) with the best possible reliability. 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, and particularly where the biases introduced by the re-enumeration sample design are not of great significance for the problems investigated. However, while deciding to choose

between a random or 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 future problems of a related nature.

127. Special precautions are generally taken in order to limit re-enumeration errors in the collection of information from the sample selected for the post-enumeration checks. Whenever possible, highly trained interviewers are engaged for this purpose; they are compensated on a basis allowing them ample time to obtain valid replies and, when necessary, to verify their work by cross-checks with other elements of information.

128. In some countries, it has been found that there are advantages in organizing a sample survey at about the same time as a complete census and in collecting information by an entirely independent group of investigators. When such a survey extends over the whole of the geographic area covered by the complete enumeration, it will supply independent results together with valid estimates of the margin of error, with the help of which it will be possible to assess the accuracy of the complete enumeration. If the complete enumeration is considered unreliable in any respect, it is also possible to obtain useful results in the form of aggregates from the data collected in the sample survey. In addition, it is possible to use the independent sample survey to collect information on topics not included in the census questionnaire.

(4) Quality control of data processing

129. It was mentioned in the previous section that the quality aspect of census data has of recent years come to the forefront of census problems. This statement is even more valid in the case of sampling 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 cards and a far greater number of columns of figures and perforations.

130. 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 and response errors, etc.) and other errors independent of processing. When final tabulations are in view, attention has to be paid to the reliability 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.

131. The economies that may be achieved by substituting statistical quality control for the traditional method of verification by repetition of each operation, depend on the relative costs of manpower and equipment. Such savings will be relatively smaller in economically less developed countries, where wages tend to be lower and mechanical equipment more expensive and difficult to obtain than in developed countries.

132. In order to obtain the best results from applying methods of quality control to census process operations, certain prerequisites of an organizational nature must be fulfilled. These include the availability of well-trained and reliable clerks and machine operators, the existence of adequate work procedures and discipline and, therefore, competent office management.

(5) Tabulation of provisional results

133. 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.

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This danger is no less serious 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.

134. It is natural, therefore, that 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 nevertheless a definite need for early tabulation of some of the results, such as the distribution of the population by age groups, employment status, branches of industry, etc., 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.

135. 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. A carefully executed sample measures changes while these are taking place, in time to be used as bases for administrative decisions. The population may be undergoing such changes that a complete enumeration by the time the data so obtained are tabulated and ready for use, may actually present a less accurate picture of the population than would be presented by a sample.

136. Another advantage of advance tabulation is that it provides a good proving ground for the sampling methods, since the precision of final results is not affected and comparisons can be made in due course between the provisional figures based on samples and the final ones obtained in the traditional manner. The advance sample tabulations may also provide a convenient tool for internal checks and analyses.

137. On the other hand, 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 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. Another disadvantage is that, owing to the preliminary character of the results, less than wholehearted public interest may be forthcoming for sample results and, as a consequence, the tables may be put to only limited and perhaps unimportant uses. 138. Another shortcoming of sample tabulation is revealed when estimates are used to assess changes from the previous census. In applications of sampling to demographic data in which variability between measures of basic elements tends to be large, the sampling errors of estimation often tend to be too great, even using the most efficient methods. Intercensal changes in certain items (e.g., populations of areas, proportionate age distributions) are small and it may be difficult to ensure that the sampling error of the estimate is of a lower order of magnitude than the actual change.

139. 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, farms 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. This would not be feasible ordinarily without incurring unduly heavy expenses and encumbrances.

140. 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.

141. In the choice of a suitable sample unit, it is essential that the sample units are extractable physically from the remainder of the returns, so that they can be sent through the operations of processing without interference with the regular processing of the census. The sample units must therefore be the same as the fundamental census units that are ordinarily processed as inseparable entities. In

many countries these entities are definable areas known for instance as "enumeration districts" and in some countries enumeration districts form suitable sample units. A sample of enumeration districts drawn in a proper manner is then to be put into the stream of processing for advance tabulations.

142. In determining the size of a sample required for preliminary results, it has to be borne in mind that each increase in the size of the sample gives greater detail and more accurate results at the expense of speed in the analysis, for the latter decreases as the sample increases. In the interest of obtaining quick results, it is necessary that the sample be no larger than that required to give only the main characteristics of population with no more than reasonable accuracy.

143. There may be some reluctance on the part of politicians, administrators and the general public to accept advance sample tabulations of a census as sufficiently reliable. Therefore, the responsibility of securing the closest and the most economical agreement between sample results on the one hand, and census results and other independent data on the other, devolves on the statistician. When a sample is scientifically designed and carefully executed, it is true that the disadvantage of the presence of sampling errors in the results is more than offset by the value of the extra information and cross-tabulations which sampling makes possible. If, however, scientifically prescribed standards are not strictly adhered to, discrepancies between sample results and other data may arise from such additional causes as biased sample selection, biased interview method, processing errors and biased estimation procedures.

(6) Tabulation of additional data and data required for special studies.

144. The principal limitations of completely tabulating all the information collected in a population census are time and money. Consequently, the tabulation programmes of most population censuses provide for the complete tabulation of only the legally prescribed items, and of those elements of demographic and economic information which are regarded as of sufficient importance for small administrative areas. Numerous 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.

/...

145. There are certain demographic characteristics which are needed only by large areas and for the country as a whole. Sampling enables one 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.

146. The problems of sample design and sample selection in the present case are similar to those encountered in connexion with tabulation of advance results on a sample basis and therefore are not repeated here. However, it should be noted that whereas advance sample tabulations are prepared for meeting urgent needs after a census and are published eventually on a complete basis, the present concern is with sample tabulations and cross-tabulations which are not intended to be prepared on a complete basis at any later date. This important difference highlights the need to exercise the utmost care in the design and execution of the sample with a view to attaining the best accuracy within permissible costs.

Part IV. THE UNIT OF ENUMERATION FOR A POPULATION CENSUS

147. In accordance with the essential feature of individuality in a population census (see para. 16), the unit of enumeration is the individual. Although each person should be enumerated separately, the household is the general framework within which individuals are identified. The household is common to the population census, the housing census and household sample surveys; it can also provide the sampling frame for subsequent sample surveys. The identification of households as a preliminary step to the enumeration greatly facilitates the efficient collection of the data and control of its completeness.

A. Identification of household

148. The proper delimitation of each household depends upon the application of a uniform definition. The household definition should distinguish two broad types: (1) private households and (2) collective households (previously designated as institutional households).

(1) Private household

149. A private household should be defined as either: (a) a one-person household, a person who lives alone in a separate housing unit^{4/} or who, as a lodger, occupies a separate room or rooms in a part of a housing unit but does not join with any of the occupants of the housing unit to form part of a multi-person household; or (b) a multi-person household, a group of two or more persons who jointly occupy the whole or part of a housing unit and who have common provisions for food or other essentials for living. The group may pool their incomes and have a common budget to a greater or lesser extent; it may be composed of related or of unrelated persons, or a combination of both, including boarders but excluding lodgers.

^{4/} For the definition of a housing unit, see "Principles and Recommendations for a Housing Census" (document E/CN.3/332, para. 62).

150. The criteria for a multi-person private household are not met by the practice of defining a household simply as the entire group of persons jointly occupying a housing unit. Although, in fact, most housing units are occupied by a single household, the exclusion from the definition of the "multi-person household" of the requirement that the persons make common provision for basic living needs would make it impossible to identify those housing units which contain more than one household (either one-or multi-person); this information is needed in connexion with housing censuses and sample surveys.

151. Slight modifications of the recommended definition may have to be made to take account of special conditions in certain countries. For example, the treatment of extended families dispersed in a colony of housing units but eating together, and of potentially separate households with a common head, resulting from polygamous unions, may necessitate some departure from the requirement that all members of a private household must occupy the same housing unit. In such cases, all the persons in the colony or compound may be considered to form a single household.

(2) Collective household

152. Collective households comprise groups of persons who live together but who do not constitute private households, such as persons living in boarding houses and hotels, in the dormitories of schools and colleges, in correctional and penal establishments, in hospitals, convents, military installations, and the like. Households in which the number of boarders and lodgers exceeds five should be considered to be collective households. The households of institutional directors and other administrative personnel who occupy separate housing units on the grounds or within the building occupied by a collective household, should be considered to be private households.

153. In addition to its significance as the unit of enumeration, the household also constitutes a unit of analysis. Recommendations concerning the collection of additional information on household characteristics are, therefore, included with the other recommendations concerning topics to be investigated in Part V.

B. Place of enumeration

154. In a census, information about each person can be collected and entered on the census questionnaire at either (a) the household where he is found on the day of the census or (b) the household of which he is usually a part, i.e., his usual residence. These households may be the same or different for any one person.

155. In compiling the census results by geographic areas, each person can be included in either (a) the household (and hence the administrative sub-division) where he was found on the day of the census or (b) the household (and the administrative sub-division) 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.

156. If a "present-in-area" population distribution is wanted, it is logical to enumerate each person at the place where he was found at the time of the census. If a distribution by usual residence is required, it is more satisfactory to collect the information about each person at his 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.

157. Some countries, however, require tabulations of both the present-in-area (place where found) and the resident population of each administrative sub-division and therefore must be able to identify separately the usual residents at each household and persons only temporarily present. This objective can be accomplished by several different methods, the essence of which is that all persons present in each household on the census day, or all persons present and all persons temporarily absent, are enumerated at each household, but a clear distinction should be made on the questionnaire 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.

158. Depending on the categories of persons enumerated at any given place, information may also 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 administrative sub-division 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).

C. Enumeration point of time

159. Each person must be enumerated as nearly as possible in respect of the same point of time. Hence, where there is a single date for the census, each person alive up to midnight at the end of that day 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 date and the person may have died in the interim. Similarly, infants born after midnight at the end of the census day are not to be entered on a schedule or included in the total population, even though they may be living when the schedule is completed.

160. As explained in paragraph 20, the single reference point of time may not be possible in a few cases if the enumeration period is excessively long; in such cases it may be necessary to use different census dates in enumerating persons in different geographic units.

161. In addition, the time-reference period need not be identical for all of the data collected for each person. In regard to most characteristics, it will be the day of the census; in some instances - economic characteristics, for example - it may be a brief period just prior to the census date.

Part V. TOPICS TO BE INVESTIGATED IN A POPULATION CENSUS

A. Factors determining selection of topics

162. The topics to be covered in the questionnaire (that is, the subjects regarding which information is collected for each individual) should be determined upon 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 satisfactorily accurate 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

163. Due weight should be given to the point that population censuses should be taken by countries to meet national needs. The first consideration is that the census should include the topics of greatest value to the country, with questions phrased in a way to elicit most accurately data of maximum use to that country. In most cases, however, 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.

(2) Importance of international comparability

164. The desirability of achieving regional and world-wide comparability should be the second 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.

(3) Suitability of topics

165. The topics investigated should be such that the respondents will be willing and able to provide satisfactorily accurate 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 which is needed in order to obtain the most reliable responses will of necessity depend on national circumstances.

(4) Resources available

166. 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. Types of topics

167. Data for most topics are collected by a specific question on the questionnaire. For other topics, the data come from information on the questionnaire but they do not necessarily come from the 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 to be tabulation components, but they are listed as topics (derived) in paragraph 175 to emphasize the fact that the questionnaires must in some way yield this information.

168. Of the topics which appear on the questionnaire, there are two types:

(a) Topics such as name or address, which are used primarily in the administration and control of the enumeration process; (b) topics such as sex, age, marital status or occupation, information on which is used directly for the compilation of the census tabulations.

169. Information required for the administration and control of the enumeration includes identity of area covered (province or state, county or district, town, enumeration area, block, etc.), identity of the enumerator, time of enumeration,

identity of each person or household enumerated in terms of name and address, and notations indicating various steps in the supervision and checking of the enumeration process. Also, certain information may be necessary to facilitate matching of information with that obtained in post-enumeration surveys and for other purposes. The nature of the control topics will depend upon the administrative design of the census, including such factors as the type of questionnaire, the method of enumeration and the arrangements for field organization and supervision. For this reason, no international recommendations are made regarding control topics.

C. List of topics

170. The topics of general national and international value given below are those in most universal use which have emerged after decades of census experience as of greatest value for both national and international purposes. Nevertheless, countries may find that it is not necessary or practicable to include certain of the recommended topics. 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 and resources available.

171. The topics are listed under two headings, namely "Basic" and "Other useful". Those recommended as basic are the topics on which data are most generally needed for all or most of the regions of the world, for both national and international use. They are considered appropriate for investigation by countries at all levels of economic development. Topics which are likely to present difficulties in statistically less-developed countries and which require careful and time-consuming questioning, can probably best be investigated for a sample of the population (see Part III).

172. The other useful topics listed are those which are of interest to a more limited number of countries. Even when they are of great interest to particular countries, they are usually not equal in importance to the basic topics. Their investigation should generally be considered only after it is determined that information on the basic topics will be made available. Some of these topics, however, appear to be of somewhat more universal use and interest than the others. Such topics are identified in the list by an asterisk (*) preceding them.

173. Each set of topics is arranged in alphabetical order under three general categories, namely, geographic and household characteristics, personal characteristics and economic characteristics. The order of the topics does not indicate priority or relative importance.

174. The definitions and specifications of each of the basic topics are presented in Section D, in alphabetical order. The recommended classification of each topic is indicated in the relevant tabulations in Part VI.

175. The definitions of the other useful topics are generally not discussed in this document and tabulations are not suggested for them. Some brief discussion of those marked by an asterisk (*) is, however, included in Section D because it is considered that improvement in the information collected may be necessary before other than experimental tabulations utilizing the topics will be justified.

(1) Basic topics recommended to be collected:

Geographic and household characteristics

1. Duration of residence
2. Household composition (derived)
3. Locality (derived)
4. Place where found at time of census and/or
5. Place of usual residence
6. Total population (derived)
7. Urban and rural (derived)

Personal characteristics

8. Age
9. Children born alive
10. Citizenship
11. Educational attainment
12. Ethnic characteristics
13. Literacy
14. Marital status
15. Place of birth
16. Relationship to head of household
17. School attendance
18. Sex

/...

Economic characteristics (current)

19. Employed and unemployed
20. Industry
21. Occupation
22. Status (as employer, employee, etc.)
23. Type of activity

(2) Other useful topics^{5/}

Geographic and household characteristics

1. Family composition (derived)
- *2. Place of previous residence
3. Age at first marriage
4. Age of spouse
5. Children living
- *6. Duration of marriage
- *7. Income
- *8. Main source of livelihood
9. Number of times married
10. Relationship to head of family
11. Religion
12. Physical disabilities
13. Professional or vocational education

Economic characteristics

14. Farm or non-farm residence
15. Farm tenure
16. Household enterprise
17. Journey to work
18. Length of employment or unemployment
19. Place of work
20. Size of enterprise
- *21. Socio-economic status (derived)
22. Time worked
- *23. Underemployment
- *24. Usual industry
- *25. Usual occupation
- *26. Usual status (as employer, employee, etc.)
- *27. Usual type of activity

^{5/} The topics preceded by an asterisk (*) are those which appear to be of somewhat more universal use and interest than those not so marked.

D. Definition and specification of basic topics^{6/}

(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 the largest possible completed units of solar time, i.e., years for adults and children and months for infants under one year of age. This information 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 impossible to use in enumerating illiterate population 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.

177. If the direct age question is used, it is desirable to obtain age in completed months for children under one year of age because of the possibility that some of these children may be erroneously reported as "one year of age" rather than "0 years of age". This detail is useful primarily for improving the accuracy of reporting. Tabulation of infant ages in completed months is not usually required.

178. Every effort should be made to ascertain the precise age of each person and particularly of children under 15 years of age. When it is not possible to obtain the ages of the persons enumerated in terms of either date of birth or completed years, it is suggested that enumerators be instructed to record age in groups which would roughly differentiate among: (1) infants under 1 year of age, (2) young children between 1 year and 5 years of age, (3) older children (6-14), (4) men in the economically active ages and women in the childbearing ages (15-45), and (5) men and women beyond these ages. If the number of persons for whom age is not stated on the questionnaire is negligible, ages may be assigned to such persons during the processing of the data in order to simplify tabulation. Such assignment should be to randomly selected ages, appropriate to the other characteristics of the individual and the household. If such allocation is employed, the method used and the number of cases should be clearly described in the census report.

^{6/} Brief discussions of some of the other useful topics listed above are also included (see para. 175).

Birthplace (see Place of birth)

(2) Children born alive

179. Information on number of children born alive should include all children born alive during the life-time of the woman concerned up to the census date (i.e., excluding foetal deaths). The number recorded should include all live-born children, whether legitimate or illegitimate, or whether born of the present or of prior marriages.

180. Information on the total number of live-born children should preferably be collected for all women 15 years of age and over, regardless of marital status. If this is not feasible, it should be collected at least for all women 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.

181. Although the data to be collected are defined as "live-born children", it is recommended that, in obtaining this, a series of probing questions on fertility be asked covering, in addition, (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. This, however, is a time-consuming method which 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.

182. The collection of information on current fertility (e.g., number of children born during the 12 months preceding the date of the inquiry) is not recommended for a census. This topic is considered more suitable for a sample survey because of the additional problems posed by the time-reference period.

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(3) Citizenship

183. 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.

184. 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. Wherever feasible and appropriate, information on the country of citizenship of aliens should also be collected.

185. 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.

186. 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.

187. 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.

Date of birth (see Age)

(4) Duration of married life

188. Duration of married life 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. The information may be secured either by asking directly for the number of years of married life or by obtaining the date of marriage and (if relevant) of the dissolution of marriage and calculating the duration at the processing stage.

189. Information on the duration of married life can be used for the analysis of fertility, in connexion with data on the number of children born alive, and for the computation of death rates and divorce rates by duration of marriage. Depending upon the uses to which the data are to be put, the inquiry may relate to any or all of the following: (a) present marriage of married persons, (b) last marriage of widowed and divorced persons or (c) all marriages of ever-married persons. If it is anticipated that the information will be used only in connexion with the analysis of the fertility of women, the male population can be excluded from the investigation.

(5) Duration of residence

190. 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 at the time of the census and (b) the major administrative division in which that locality is located.

191. 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 visitors or transients, so that they will not erroneously be counted as recent migrants.

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

(6) Economic characteristics (current and usual)

193. Each population census should collect information by which the population can be classified according to (a) type of economic activity and, more specifically for persons in the economically active group, as (b) employed or unemployed and by (c) industry, (d) occupation and (e) status (as employer, employee, etc.); the

information should also permit the classification of persons in the not-economically-active group according to the principal functional categories to which they belong. The census reports should clearly specify the composition of each group and each functional category, in terms of the recommended definitions set forth below.

(a) Activity, type of

194. 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.

195. 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 15 years. Those countries which 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 highly industrialized countries, where employment of young children is rare. In tabulation of the data, it is desirable that, for international purposes, an age classification be adopted which distinguishes economically active persons under 15 years of age (in countries where the minimum age is lower) from those 15 years of age and over.

196. 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.^{7/} 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 might 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.

197. Economically active population comprises all persons of either sex who furnish the supply of labour for the production of economic goods and services

^{7/} See International Labour Office, "Resolution Concerning Statistics of the Labour Force, Employment and Unemployment" in Eighth International Conference of Labour Statisticians, Appendix I, Geneva, 1955, p. 42. /...

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. The civilian labour force comprises both persons employed and those unemployed during the time reference period.^{8/}

198. Not-economically-active population comprises the following functional categories as defined below: (i) homemakers, (ii) students, (iii) persons in institutions (iv) income-recipients and (v) all other persons not included in the economically active population. Persons who are employed or unemployed during the reference period are economically active and hence should not be included in the not-economically active population, even though they may at the same time be, for example, students or home-makers.

- (i) Homemakers: 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.)
- (ii) Students: persons of either sex, not economically active, who attend a public or private school or university, regardless of level or type, or who study privately.
- (iii) Persons in institutions: persons of either sex who are inmates of convents, penal or mental institutions, or of other residential institutions for the care of the infirm, the aged, the needy or children.
- (iv) Income recipients: persons of either sex, not economically active, who receive income from pensions, rents, royalties, dividends, etc.
- (v) Others: persons of either sex, not economically active, who are not included in any of the above categories, such as children not attending school, persons too old or unable to work but who are not income-recipients or in institutions, etc.

199. 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 homemaker at the same time), the enumeration instructions should indicate the order of preference for assigning persons to one or/another of the categories.

^{8/} Ibid.

(b) Employed and unemployed

200. The employed comprise all persons, including family workers, who, during the reference period, are working or who have a job, but are temporarily not at work, whether they are full-time workers or part-time workers, provided that the latter work at least a minimum period (to be set, by each country, sufficiently low to exclude only those whose contributions are negligible.^{9/}

201. The unemployed consist of all persons who, during the reference period, are not working but who are seeking work for pay or profit, including those who never worked before. Also included are persons who, during the reference period, are not seeking work because of temporary illness, because they made arrangements to start a new job subsequent to the reference period, or because they are on temporary or indefinite layoff without pay.^{10/}

(c) Industry

202. Industry refers to the kind of establishment in which the person works (or worked, if unemployed). For purposes of international comparability, it is recommended that countries compile their data in accordance with the International Standard Industrial Classification of all Economic Activities (ISIC) most recently approved by the United Nations. If this is not possible, provision should be made for the categories of the classification employed to be convertible to the Standard Classification or at least to the major (two digit) groups of this classification. If the national data are not classified in accordance with ISIC, an explanation of the differences should be given.

203. If data on secondary occupation are collected (see para. 205), information on industry in regard to the secondary occupation may also be collected.

(d) Occupation

204. Occupation refers to the kind of work done by the person employed (or performed previously by the unemployed) irrespective of the branch of economic activity or the status (as employer, employee, etc.) in which the person should

^{9/} Ibid.

^{10/} Ibid.

be classified. For purposes of international comparisons, it is recommended that countries compile their data in accordance with the latest edition of the International Standard Classification of Occupations (ISCO) recommended by the International Labour Office. If this is not possible, provision should be made for the categories of the classification employed to be convertible to the Standard Classification or at least to the minor (two digit) groups of this classification. If national data are not classified in conformity with ISCO, an explanation of the differences should be given.

205. If it is thought that many persons in a country have more than one occupation (either simultaneously or consecutively during the time-reference period), information on the secondary occupation may also be collected.

Socio-economic status (see Status, socio-economic)

(e) Status (as employer, employee, etc.)

206. Status (as employer, employee, etc.) refers to the status of an individual with respect to his employment, that is, whether he is (or was, if unemployed) an employer, own-account worker, employee, family worker, or a member of a producers' co-operative, as defined below:

- (i) 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.
- (ii) 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.
- (iii) 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. In economically developing countries, it may be useful to distinguish between persons employed in large and in small establishments, defined on the basis of the total number of employees in the establishment.
- (iv) Family worker: a person who works a specified minimum amount of time (at least 1/3 of normal working hours), with or without pay, in an economic enterprise operated by another member of his (or her) household.

Where it is feasible to distinguish between unpaid family workers and paid family workers, they should constitute separate sub-groups. If there are a significant number of family workers in enterprises of which the operators are members of a producers' co-operative who are classified in category (v), these family workers should be classified in a separate sub-group.

- (v) Members of producers' co-operative: a person who is an active member of a producers' co-operative, whether in industry or in agriculture.

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.

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

207-209. [Deleted].

210. If data on secondary occupation are collected (see para. 205), information on status (as employer, employee, etc.) in regard to the secondary occupation may also be collected.

(f) Status, socio-economic

211. 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 homogenous and, on the other hand, fairly clearly distinguished from other groups in respect of their behaviour and which can, therefore, be used to establish the relationship between the socio-economic position of individuals (and households) and many demographic, social, economic and cultural phenomena.

212. 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.

.../...

213. 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.

214. 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.^{11/}

(g) Underemployment

215. Adequate measurement of the degree of underemployment in a country involves many variables which are beyond the scope of a population census and which may better be investigated in labour-force sample surveys. Nevertheless, certain kinds of information on this most important phenomenon, which can provide some broad indications of the extent of visible underemployment, can be collected in a census if sufficient resources are available; these include information on: (i) persons who worked less than a specified number of hours per week or weeks per year; (ii) persons who both worked and looked for work during the specified time period; and (iii) in agriculture, own-account and family workers who operate a farm below some specified size, or who raise certain types of crops, or who operate largely subsistence, or semi-subsistence, farms.

Usual industry (see Industry)

Usual occupation (see Occupation)

Usual status (see Status (as employer, employee, etc.))

Usual type of activity (see Activity, Type of)

(7) Educational attainment

216. Educational attainment is the highest grade completed within the most advanced level attended in the educational system of the country where the education was

^{11/} Conference of European Statisticians, Working Group on Censuses of Population and Housing, European Programme for National Population Censuses (United Nations document Conf. Eur. Stats/WG.6/81), paragraphs 69-72 and Report of the Fifth Session (United Nations document Conf. Eur. Stats/WG.6/97), paragraphs 89-95.

received. Information on educational attainment should be collected for all persons at or beyond the usual age for entrance into school.

217. For international purposes, a grade is a stage of instruction usually covered in the course of a school year. Information should be collected so that the following levels of education can be identified.^{12/}

(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) Educational 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 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.

218. Where possible, education at the second level should be sub-divided by type as follows:

(a) General education, which does not aim at preparing the pupils directly for a given trade or occupation.

(b) Vocational education, which aims at preparing the pupils directly for a trade or occupation other than teaching.

^{12/} The definitions are those of the United Nations Educational, Scientific and Cultural Organization, Recommendation Concerning the International Standardization of Educational Statistics, Adopted by the General Conference at its Tenth Session, Paris, 3 December 1958.

(c) Teacher training, which aims at preparing the pupils directly for teaching.

219. Where possible, education at the third level should be sub-divided by type, as follows:

(a) Education at universities and equivalent institutions leading to an academic degree.

(b) Teacher education at non-university institutions.

(c) Other education at non-university institutions.

220. Necessary deviations from the international definitions and classifications, which 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.

Employed and unemployed (see Economic characteristics)

(8) Ethnic characteristics

221. The ethnic characteristics of the population about which information is needed in different countries is dependent upon national circumstances. Some of the bases on which ethnic groups are identified are: country or area of origin, race, colour, lingual affiliation, religion, customs of dress or eating, tribal membership, or various combinations of these characteristics. In addition, some of the terms used, such as "race" or "origin", 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 which 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.

222. Because of the interpretative difficulties which 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.

Family nucleus (see Household composition)

(9) Household composition

223. 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 household can be examined from different points of view. For census purposes, it is recommended that the primary aspect which should be considered is the number of family nuclei of which the household is composed.

224. 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.

225. As set forth in paragraph 149, a private household is defined as either:

(a) a one-person household: a person who lives alone in a separate housing unit or who, as a lodger, occupies a separate room or rooms in a part of a housing unit but does not join with any of the occupants of the housing unit to form part of a multi-person household; or (b) a multi-person household: a group of two or more persons who jointly occupy the whole or part of a housing unit and who have common provisions for food or other essentials for living. The group may pool their incomes and have a common budget to a greater or lesser extent. It may be composed of related or of unrelated persons, or a combination of both, including boarders but excluding lodgers.

226. The family is defined as those members of the private household 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.

227. Because, by definition, the members of a private household must occupy the same housing unit, 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.

228. In determining the number of families of which the household is composed, consideration should be given to restricting the family to a married couple or parents and their unmarried children in the same household, i.e., the family nucleus. A family nucleus, therefore, consists of the following combinations of persons within the same household: (a) a married couple without children, (b) a married couple with one or more unmarried children or (c) one parent (either father or mother) with one or more unmarried children. Couples living in consensual unions should be regarded as married couples.

229. Accordingly, a household which consists of a man and wife, their two unmarried children, a married daughter and her husband, and a married boarder and his wife and child would be considered as a three-family household.

230. It is obvious that the above definition, although it takes into consideration 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 from the family 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.

231. The family or the family nucleus is usually identified at the processing stage on the basis of name and relationship to the head of the household. If it is desired to identify heads of families, both the family and its head must be determined by means of direct questions at the enumeration.

(10) Household head, relationship to

232. The head of the household is that person in the private 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 on whom falls 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.

233. In investigating 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) father or mother of the head or of the spouse of the head, (g) other relative of the head, (h) boarder, (i) domestic servant, or (j) other person not related to the head. An additional category of "other employee" (e.g., a person employed in the family business) may be useful in some countries.

234. Relationship to the head of the household is not appropriate as a basis of classifying persons in collective households, except for guests residing in hotels, who in all other respects constitute private households and are treated as such.

(11) Income

235. Countries which desire to collect information on income in their censuses should consider (a) the type of income for which data are needed (e.g., wage or salary income, income from operation of an enterprise or self-employment income, income from real property, other investment income, pensions, or total income), (b) the time-reference period to be used, (c) the definition of income (e.g., monetary only or monetary plus payment in kind), (d) the population for which the data are to be collected and (e) whether the information is to be collected separately for each person or for the household or family as a whole.

236. The determination of the population for which the data are to be collected will depend on the first two factors. If, for example, information is wanted only on wage and salary income, and if the time-reference period is identical to the period for questions on economic activity, it may be sufficient to collect the data only from persons classified as employees or paid family workers (or only for the total of employees and paid family workers in the household or family), with the understanding that no information will be obtained for persons who have worked less than the minimum amount of time required for classification as economically active. It should be noted, however, that the coincidence of time periods is not likely to occur because it is advisable that data on income refer to a period of 12 months, while it is recommended that data on economic characteristics refer to a period

of not more than one week. It may therefore be necessary to inquire about wage or salary income for each person, regardless of his (or her) economic characteristics at the time of the census. Similar considerations will arise in connexion with the other types of income data as well.

237. Attention should be paid to the level of accuracy which can be expected in the replies. Inaccuracies may arise from inability to grasp the concept of income involved or from deliberate understatement because of fear of taxation. If these two factors are known to be present to a marked extent, the inquiry might better not be undertaken. Understatement may be avoided to some extent if the information is requested in class intervals rather than in precise amounts. This is also a time-saving technique if the intervals selected are those which will be used in the tabulations, so that the entries on the questionnaire can be in pre-coded form.

Industry (see Economic characteristics)

(12) Literacy

238. 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.^{13/} 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.

239. The language in which a person can read and write is not a factor in determining literacy and need not be considered on the questionnaire.

240. Since literacy is defined as the ability both to read and to write, a single questionnaire item on ability to read and write is adequate.

241. Data on this topic should be collected for all persons ten years of age or over. If a lower age limit is used for the collection of information, any tabulation not cross-classified by age should be sub-divided at this age so as to facilitate international comparisons.

^{13/} United Nations Educational, Scientific and Cultural Organization, op. cit.

Live-born children (see Children born alive)

(13) Locality

242. For census purposes, a locality should be defined as a distinct and indivisible population cluster (also designated as inhabited place, populated centre, settlement, etc.) having a name or a locally recognized status and functioning as an integrated social entity, irrespective of the size of its population. 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.

243. 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 town may contain two or more civil divisions, which should be considered only segments of a single locality rather than separate localities.

244. A large locality of a country (i.e., city or 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.

(14) Main source of livelihood

245. Some countries may wish to collect information on the main source of livelihood of each person, so as to permit a classification of the total population into persons whose main source of income is (a) an economic activity, (b) property or other investments, (c) pension or (d) support by another person.

246. Such a classification should include 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 dependants.

247. The category of economically active persons whose main sources of livelihood is not their principal occupation is likely to be particularly important when the labour-force concept of economically active population is used, because some people classified as economically active will in fact only be working for a brief portion of the year. The category may also be important even when a longer time-reference period is applied, if the minimum amount of working time required of a person for inclusion in the economically active population is relatively low.

248. The collection of information on the persons on whom dependants actually depend, or the distinguishing of independent persons and their dependants at the data processing stage according to certain criteria, is not recommended. These techniques have been used in efforts to arrive at tabulations of the population dependent upon branches of industry but the difficulties of collecting precise information at the enumeration and the dubious nature of the assumptions which must be made if dependants are determined at the processing stage, cast doubts on the validity of the results.

(15) Marital status

249. Marital status is the personal status of each individual in relation to the marriage laws of the country. The categories of marital status to be identified should be: (a) single i.e., never married, (b) formally married and not separated from spouse, (c) in stable de facto union, (d) widowed and not remarried, (e) divorced and not remarried, (f) legally separated from spouse, (g) formally married but de facto separated from spouse, (h) formerly stable de facto union but no longer forming part of such a union. 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 separate category; if its size is insignificant, the individuals should be classified according to their marital status before the annulled marriage took place.

250. Some countries have experienced difficulties with distinguishing (a) between formal marriage 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. In addition, it may be difficult to identify

persons formerly in stable de facto unions but no longer forming part of such a union. 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.

251. Information on marital status 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, however, tabulations of marital status should distinguish between persons under fifteen years of age and those fifteen years of age and over.

252. 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.

253. 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 which wish to investigate these relationships should consider the possibility of collecting separate data on formal marital unions, on de facto unions and on the duration of each type of union.

Occupation (see Economic characteristics)

(16) Place of birth

254. Place of birth is defined as the country, or specified type of geographic unit of the country, in which the individual was born.

255. The collection of information distinguishing between persons born in the country where the census is taken, and those born elsewhere, 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-born 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.

256. For purposes of international comparability, as well as for internal use, it is preferable that information on place of birth be 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.

257. Information on place of birth of the native-born population is usually used primarily for the investigation of internal migration. For those countries which 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.

258. For the latter purpose, it is usually sufficient to collect information only on the major territorial 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 tabulations for smaller areas.

259. For studies of internal migration, data on place of birth of the native-born population, particularly in terms of major territorial 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 so that the tabulation could show separately the numbers of residents who were born in that city, elsewhere in the same major territorial division, or in another major territorial division. Similar information for persons in each intermediate or minor territorial 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, territorial division. 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.

260. It is recommended, therefore, that for the study of internal migration, preference be given to the collection of information on duration of residence (see paragraphs 190-192).

(17) Place of previous residence

261. Place of previous residence is the locality and the major administrative division in which the individual resided immediately prior to migrating into his present locality of usual residence.

262. 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 place 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.

(18) Place of usual residence^{14/}

263. 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

^{14/} 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.

was found at the time of the census. 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.

(19) Place where found at time of census^{15/}

264. 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 sub-divisions) 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 division and for localities.

Population total (see Total population)

Relationship to head of household (see Household head, relationship to)

(20) School attendance

265. 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.^{16/} Instruction in particular skills which is not part of the recognized educational structure of the country is not considered "school attendance" for this purpose.

266. 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.

15/ Ibid.

16/ See the definition of a pupil in United Nations Educational, Cultural and Scientific Organization, op. cit., and the distinction therein between full and part-time school attendance.

(21) Sex

267. The sex of every individual should be recorded on the census questionnaire. If the information is unknown or not recorded, an allocation, based on other entries on the questionnaire, should be made at the data processing stage.

Socio-economic characteristics (see Economic characteristics)

Status (as employer, employee, etc.) (see Economic characteristics)

(22) Total population

268. 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 the 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.

269. 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. In addition, the magnitude of each group should be given, together with an indication of whether the group was enumerated or if its size was estimated.

270. The groups to be considered are:

(a) Nomads and persons living in remote areas who are outside of the predominant social and economic structure of the country.

(b) Military, naval and diplomatic personnel and their families located outside the country.

(c) 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 on board ship).

(d) Other civilian residents temporarily absent from the country at the time of the census.

(e) Foreign military, naval and diplomatic personnel and their families located in the country.

/...

(f) Other civilian aliens temporarily in the country at the time of the census.

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

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

272. 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.

273. Note: The 1960 recommendation that countries should endeavour to provide an "international conventional total" population figure is not included in the present recommendations. It has been deleted because (a) comparatively few countries were able to compile this figure from the results of their recent censuses and (b) it is now considered that the usefulness of such a figure was over-estimated because exact international comparisons cannot be computed for any given year so long as all countries do not hold their censuses in the same year and at the same date.⁷

Underemployment (see Economic characteristics)

(23) Urban and rural

274. Because of national differences in the characteristics which 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.

275. The traditional distinction between urban and rural areas within a country has implied the assumption that urban areas, no matter how they are defined (e.g., as localities of a certain size, as administrative centres of minor civil divisions, as cities or towns, or as localities having certain "urban" characteristics) provide a different way of life and a higher level of living than is found in rural areas, because of the availability in the former of such amenities as paved roads, electricity, sewage disposal, medical care, schools, recreation facilities and many different kinds of employment opportunities. In some countries, these differences still persist to a marked degree and might well be reflected in the definition of "urban".

276. In other countries, such facilities have, in recent years, spread throughout the country; the principal difference in living between urban and rural areas then tends to be a matter of the degree of concentration of the population. At the same time, rapid and unplanned urbanization has produced, in many urban areas, problems of unemployment, low wages, inadequate housing, a lack of facilities for health and education, etc. In order to plan for the alleviation of these conditions, information is required on the characteristics of the persons living in areas of concentrated population and on the rate of growth of these areas.

277. For national purposes, and also for international comparability, the most appropriate unit of classification for these purposes is the locality, as defined in paragraph 242, or, if this is not possible, the smallest administrative division of the country. Each unit can then be classified as urban, semi-urban or rural according to the size of the population of the locality or of the largest cluster of population within the administrative division. A classification of this nature has been recommended for use in European countries by the Working Group on Censuses of Population and Housing of the Conference of European Statisticians.^{17/} The Working Group has agreed that, in Europe, the population size for distinguishing rural from semi-urban localities (or administrative divisions) should be as close as possible to 2,000 persons, while that distinguishing semi-urban from urban localities (or administrative divisions) should be as close as possible to 10,000 persons.

278. Such a recommendation is not yet feasible for world-wide use because (a) not all countries have yet achieved the level of economic development where size alone is a sufficient criterion of urban or rural areas and (b) the same population-size limits may not be appropriate in all regions. Many countries, however, may find that this approach is suitable to their needs. If regional recommendations on the size limits to be observed are available at the time of the census, their specifications should be followed.

^{17/} Conference of European Statisticians, Working Group on Censuses of Population and Housing, Report of the Fifth Session (United Nations document Conf. Eur. Stats/WG.6/97), para. 158.

Part VI. RECOMMENDED TABULATIONS

A. Scope and objective of recommended tabulations

279. The census tabulations outlined in this part include recommended basic and additional tabulations. Both types of tabulations deal with the basic topics recommended for collection. The basic tabulations are of most general importance and are presumed to be of world-wide interest. The additional tabulations, while also of generally recognized value, are of primary interest in only some of the regions in the world, serve somewhat more specialized purposes than the basic tabulations or involve somewhat more elaborate compilation procedures.

Accompanying each recommended tabulation is a statement of the principal uses of the data supplied by it.^{18/}

280. The recommended tabulations constitute a modest programme and many other useful 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 topics or could introduce information on the other useful topics listed in part V of this document.

281. The feasibility of preparing the recommended additional tabulations, and any further tabulations contemplated, will depend to a considerable extent on the method of data processing utilized. The application of electronic data processing makes possible the rapid preparation of a larger number of tabulations and the inclusion of a greater amount of detail within each tabulation.

282. 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 paragraph 81 and Part III).

283. The specifications for each tabulation include, inter alia, a geographic classification. Tabulations for the sub-national areas specified may be prepared

^{18/} 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.

on the basis of the resident population of each area or the population found in each area at the time of the census, as defined in paragraphs 263-264.

Tabulations related 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 services, such as schools and housing, which apply 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 usually considerably larger than the resident population and affects requirements for police protection, medical services and transportation, and raises the demand for products and services above the level which would be required by the resident population alone.

284. It should be noted that 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 tabulation, according to the needs of each country, so long as the indicated categories and cross-tabulations are made available.

B. List of recommended tabulations

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

Tabulation
number

Title

Basic tabulations

1. Total population and population of major, intermediate and minor administrative divisions, by sex.
2. Population in localities by size-class of locality and sex.
3. Population of principal localities by sex.
4. Population by duration of residence in locality and major administrative division, age and sex.
5. Population by type of household and size of private households.
6. Population in private households by size of household and number of family nuclei.
7. Population by single years of age and sex.
8. Population by five-year age groups and sex.
9. Population by marital status, age and sex.
10. Population by place of birth, age and sex.
11. Foreign-born population by country of birth, age and sex.
12. Population by citizenship, age and sex.
13. Population ... years of age and over by type of activity, age and sex.
14. Employed and unemployed population by age and sex.
15. Economically active population by industry, age and sex.
16. Economically active population by occupation, age and sex.
17. Economically active population by status, age and sex.
18. Economically active population by status, industry and sex.
19. Economically active population by status, occupation and sex.
20. Economically active female population by marital status, age and sex.

/...

Tabulation number	Title
<u>Basic tabulations</u>	
21.	Population 10 years of age and over by literacy, age and sex.
22.	Population 25 years of age and over by educational attainment, age and sex.
23.	Population ... to 24 years of age by school attendance, educational attainment, age and sex.
24.	Population ... to 24 years of age by school attendance, age and sex.
25.	Population by ethnic group, age and sex.
26.	Female population 15 years of age and over by age and number of children born alive.
<u>Additional tabulations</u>	
27.	Population in private households by relationship to head of household, marital status and sex.
28.	Native-born population by major administrative division of birth, age and sex.
29.	Alien population by country of citizenship, age and sex.
30.	Population not economically active by functional categories, age and sex.
31.	Economically active population by industry, occupation and sex.
32.	Economically active population by occupation, marital status, age and sex.
33.	Economically active population by occupation, educational attainment, age and sex.
34.	Female population 15 years of age and over by age, number of children born alive and educational attainment.

C. Specifications for each recommended tabulation

286. The specifications for each tabulation indicate the population to be included, the geographic classification and the attribute classifications. The principal uses of the data supplied by the tabulation are also given, as well as an indication of the changes (if any) which have been made from analogous tabulations which were recommended for the 1960 censuses, as included in Principles and Recommendations for National Population Censuses.^{19/}

287. The geographic classifications shown are intended to be a guide to the types of administrative subdivisions of each country for which the information provided by the tabulation is generally needed; appropriate urban and rural classification is also indicated.

288. Countries will undoubtedly also wish to prepare at least some of the tabulations for additional areas, such as smaller administrative divisions than are indicated, or economic regions. The areas for which it is feasible to show information will be affected by the use of sampling either to collect the information or in tabulating the data.

289. The paragraph numbers following each attribute classification correspond to the paragraphs in part IV where the respective topics are discussed.

(1) Basic tabulations

Tabulation 1 (Basic). TOTAL POPULATION AND POPULATION OF MAJOR AND MINOR CIVIL DIVISIONS, BY SEX

Population included: total population.

Geographic classification: (a) total country, (b) each major and minor civil division. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Sex (para. 267): male, female.

Use of the tabulation:

1. The determination, by means of the census, of the total population and its distribution among major, intermediate and minor territorial divisions is

^{19/} Op. cit.

frequently a legal requirement, because the results are used to determine the apportionment of representation in legislative bodies.

2. 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.

3. In addition, the information is required for the computation of vital statistics rates on the sub-national 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.

Changes from 1960 United Nations recommendations:

4. The word "civil" has been substituted for "territorial", as a more precise term for the types of geographic divisions for which the data should be tabulated.

5. The classification of the urban and rural population of the total country by sex, was previously recommended as part of a tabulation of urban and rural population by sex and age. The identification of the urban and rural population of each civil division was not previously recommended.

6. Note: This tabulation was given first priority in both the 1960 European Programme for National Population Censuses (tab. 1, first priority)^{20/} and the Program of the 1960 Census of America (minimum tab. 1);^{21/} it is also included in the Inter-American Program of Basic Statistics (tab. I.A.1.1).^{22/} The Basic

^{20/} United Nations document Conf. Eur. Stats/WG.6/81.

^{21/} Inter-American Statistical Institute document 3841 (COINS).

^{22/} Inter-American Statistical Institute document 4921.

Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East specifies a tabulation of the population by age and sex for major subdivisions of the country.^{23/7}

Tabulation 2 (Basic). POPULATION IN LOCALITIES BY SIZE-CLASS OF LOCALITY AND SEX

Population included: total population.

Geographic classification: (a) total country, (b) each major civil division.

Attribute classifications:

(a) Size-class of locality (paras. 242-244):

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 identifiable localities;

and, separately, number of localities of each size class.

(b) Sex (para. 267): male, female

Use of the tabulation:

1. 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 242. 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.

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

3. 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 variously useful in distinguishing urban and rural localities.

Changes from 1960 United Nations recommendations:

4. No changes.

5. Note: A similar tabulation is found in The Program of the 1960 Census of America (minimum tab. 3)^{24/} and in the Inter-American Program of Basic Statistics (tab. I.A.1.2);^{25/} in both instances, however, the category of localities of 100,000 - 499,999 inhabitants is replaced by two categories of 100,000 - 199,999 and 200,000 - 499,999 respectively. The categories in the 1960 European Programme for National Population Censuses (tab. 4, second priority) are the same as in the present recommendation.^{26/7}

Tabulation 3 (Basic). POPULATION OF PRINCIPAL LOCALITIES BY SEX

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

Geographic classification: total country.

^{24/} IASI document 3841 (COINS).

^{25/} IASI document 4921.

^{26/} United Nations document Conf. Eur. Stats/WG.6/81.

Attribute classifications:

(a) Principal localities and their urban agglomerations (paras. 242-244): each specified city or town, the urban agglomeration of each specified city or town.

(b) Sex (para. 267): male, female.

Use of the tabulation:

1. 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.

2. 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.

3. 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.

Changes from 1960 United Nations recommendations:

4. The requirement in the 1960 recommendation that the population of the capital of the country be included in this tabulation has been deleted. If, as is usually the case, the capital is one of the principal cities of the country, it will necessarily appear in the tabulation; its inclusion simply as the capital is not relevant to the uses of the data shown.

5. The 1960 recommendation did not call for the identification of urban agglomerations.

6. Note: The importance of this tabulation was recognized in the 1960 European Programme for National Population Censuses (tab. 2, first priority)^{27/} and in the Program of the 1960 Census of America (minimum tab. 2).^{28/} It is also found in the Inter-American Program of Basic Statistics (tab. I.A.1.3)^{29/} and in Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East.^{30/}

Tabulation 4 (Basic). POPULATION BY DURATION OF RESIDENCE IN LOCALITY AND MAJOR CIVIL DIVISION, AGE AND SEX

Population included: total population.

Geographic classification: (a) total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Duration of residence in locality (paras. 190-192): 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.

(b) Duration of residence in major administrative division (paras. 190-192): as for (a).

(c) 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.

(c) Sex (paras. 267): male, female.

Use of the tabulation:

1. This tabulation provides information on net migration levels. It also shows the direction of in-migration in terms of major administrative divisions of the country and the most important localities. Such data are useful for preparing

^{27/} United Nations document Conf. Eur. Stats/WG.6/81.

^{28/} IASI document 3841 (COINS).

^{29/} IASI document 4921.

^{30/} United Nations document E/CN.11/ASTAT/Conf.6/L.4.

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.

Changes from 1960 United Nations recommendations:

2. This tabulation was not previously included.

3. Note: There has been a growing awareness during the last decade of the necessity of collecting data on internal migration by the census if the information cannot be obtained from reliable continuous population registers. The Conference of Asian Statisticians has recommended the inclusion of an item on "duration of residence" in the 1970 censuses.^{31/} A tabulation of population by duration of residence in major civil division, sex and age is included in the Inter-American Program of Basic Statistics (tab. I.A.1.6).^{32/}

Tabulation 5 (Basic). POPULATION BY TYPE OF HOUSEHOLD AND SIZE OF PRIVATE HOUSEHOLD

Population included: total population.

Geographic classification: (a) total country; (b) each major and minor civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attributed classifications:

(a) Type of household (paras. 223-227): private, collective, not stated, and, separately, the number of households of each type.

(b) Size of private household (paras. 223-227): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 persons and over, not stated and, separately, the number of private households of each size.

Use of tabulation:

1. The distinction between private and collective households is essential to any analysis of household data. The private household is a basic socio-economic unit

^{31/} United Nations document E/CN.11/686.

^{32/} IASI document 4921.

in all countries and is often central to the study of social and economic development.

2. Information on the number and size of private 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.

3. 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.

Changes from 1960 United Nations recommendations:

4. No changes.

5. Note: This tabulation has been recommended in the 1960 European Programme for National Population Censuses (tab. 14, first priority)^{33/} and in the Program of the 1960 Census of America (minimum tab. 16).^{34/} It is also found in the Inter-American Program of Basic Statistics (tab. I.A.1.9)^{35/} and in Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East.^{36/} Both the Conference of Asian Statisticians^{37/} and the Working Group on Censuses of Population and Housing of the Conference of European Statisticians^{38/} have recommended the collection of these data in the 1970 censuses.]

^{33/} United Nations document Conf. Eur. Stats/WG.6/81.

^{34/} IASI document 3841 (COINS).

^{35/} IASI document 4921.

^{36/} United Nations document E/CN.11/ASTAT/Conf.6/L.4.

^{37/} United Nations document E/CN.11/686.

^{38/} United Nations document Conf. Eur. Stats/WG.6/97.

Tabulation 6 (Basic). POPULATION IN PRIVATE HOUSEHOLDS BY SIZE OF HOUSEHOLD AND NUMBER OF FAMILY NUCLEI

Population included: all members of private households.

Geographic classification: (a) total country, (b) each major and minor civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Size of private household (paras. 223-227): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and more persons, not stated, and, separately, the number of private households of each size.

(b) Number of family nuclei (paras. 228-231): 0 (non-family household), 1, 2, 3, 4 and more, not stated, and, separately, the number of households containing each number of family nuclei.

Use of the tabulation:

1. 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.

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

Changes from 1960 United Nations recommendations:

3. This tabulation was not previously included. It takes the place of the previously recommended tabulation No. 14, Population in private households by structural types and size, which was designed to yield information on the number of households consisting of persons in specified family relationships but did not provide information on households according to the total number of family nuclei within them. It is considered that the latter data are more useful for analytical purposes than the former.

4. Note: This tabulation has not so far been included in any of the regional recommendations for population censuses, but the information is called for in Principles and Recommendations for a Housing Census.^{39/7}

Tabulation 7 (Basic). POPULATION BY SINGLE YEARS OF AGE AND SEX

Population included: total population.

Geographic classification: total country. Distinguish urban and rural (paras. 274-278).

Attribute classifications:

(a) Age (paras. 176-178): under 1 year, 1, 2, 3, 4, 5, 6, 7 ... single years to 99, 100 and over, not stated.

(b) Sex (para. 267): male, female.

Use of the tabulation:

1. 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 or the population of voting age) without interpolating from 5-year age groups.

Changes from 1960 United Nations recommendations:

2. In 1960, it was recommended that urban and rural population be classified by 5-year age groups. The classification of urban and rural population by single years of age has been introduced because urban-rural age differentials are important in the uses of the tabulation described above.

3. Note: The tabulation of the total population by single years of age and sex is recommended in the 1960 European Programme for National Population Censuses

^{39/} United Nations document E/CN.3/332.

(tab. 5, first priority),^{40/} in the Program for the 1960 Census of America (minimum tab. 4)^{41/} and in the Inter-American Program of Basic Statistics (tab. I.A.1.4).^{42/} The age classification for the tabulation of urban and rural population set forth in the 1960 European Programme (tab; 3, second priority) is in 5-year groups; it is likely that the final specifications for the Inter-American Program will include a single-year-of-age classification for the urban and rural population of the total country and of major civil divisions.⁷

Tabulation 8 (Basic). POPULATION BY FIVE-YEAR AGE GROUPS AND SEX

Population included: total population.

Geographic classification: (a) total country, (b) each major and minor civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) 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.

(b) Sex (para. 267): male, female.

Use of the tabulation:

1. 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 forecasts, 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 of the various geographic areas according to the age groups used in most of the other recommended tabulations.

^{40/} United Nations document Conf. Eur. Stats/WG.6/81.

^{41/} IASI document 3841 (COINS).

^{42/} IASI document 4921.

Changes from 1960 United Nations recommendations:

2. Because the 1960 recommendation did not indicate the geographic classifications to be employed in the census tabulations, the recommendation therein was stated in terms of the urban and rural population of the total country. The present recommendation indicates the additional geographic areas for which the data should be tabulated.

3. Note: The tabulation of the total, urban and rural population by five-year age groups and sex is included in the 1960 European Programme for National Population Censuses (tab. 3, second priority).^{43/} It is likely that the final specifications for the Inter-American Program of Basic Statistics will include a tabulation of the population in urban and rural areas of major civil divisions by single years of age and sex.^{44/} The Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East does not specify the age classification to be used in tabulations of the age-sex composition of the population.^{45/} The paucity of specific regional recommendations for this tabulation should not, however, be construed as indicating that the data are not considered important, because their tabulation is implicit in the age classifications employed in tabulations of other characteristics of the population.⁷

Tabulation 9 (Basic). POPULATION BY MARITAL STATUS, AGE AND SEX

Population included: total population.

Geographic classification: (a) total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274 (paras. 274-278)).

Attribute classifications:

(a) Marital status^{*} (paras. 249-253): single, married (of which, (i) formally married and not separated from spouse and (ii) in stable de facto union), widowed, divorced, separated (of which (i) legally separated, (ii) formally married but

^{43/} United Nations document Conf. Eur. Stats/WG.6/81.

^{44/} IASI document 3841 (COINS).

^{45/} United Nations document E/CN.11/ASTAT/Conf.6/L.4.

de facto separated and (iii) formerly in stable de facto union but no longer forming part of such a union), not stated.

(b) Age (paras. 176-178): 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.

(c) Sex (para. 267): male, female.

* 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.

Use of the tabulation

1. 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 never married. For this type of analysis, information on de facto, rather than legal, marital status is most useful.
2. 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.
3. 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.

Changes from 1960 United Nations recommendations

4. The 1960 recommendation included a first-priority tabulation of the total population by marital status, age and sex and a second priority tabulation of the urban and rural population by marital status, age and sex. Since marital status

is one of the topics for which it is now recommended that urban and rural categories be shown separately in the geographic classification, the former second-priority tabulation has been eliminated.

5. The marital status categories have been expanded in the present tabulation. In the 1960 recommendation, persons legally separated from their spouses were included with the divorced. In the present tabulation, persons separated from their spouses, whether legally or de facto, constitute a separate category. This classification permits the derivation of the married population and the marriageable population, which is not possible if the divorced and the legally separated are included in a single category.

6. The optional addition of a separate category of persons whose only, or latest, marriage has been annulled is also new.

7. The introduction of the sub-categories under the major categories of "married" and "separated", which were not included in the 1960 tabulation, allows the data to be adapted to the different uses described above and clarifies the composition of the major categories.

8. Note: A tabulation of population by marital status, age and sex is included in the 1960 European Program for National Population Censuses (tab. 6, first priority),^{46/} the Program of the 1960 Census of America (minimum tab. 5),^{47/} the Inter American Program of Basic Statistics (tab. I.A.1.7)^{48/} and Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East.^{49/} The Working Groups on Censuses of Population and Housing of both the Conference of European Statisticians^{50/} and the Conference of African Statisticians^{51/} have stressed the importance of distinguishing "separated" persons from the "divorced", to enable estimates to be compiled of the marriageable population, for the calculation of marriage rates, and of the married population, for the calculation of divorce rates.⁷

^{46/} United Nations document Conf. Eur. Stats/WG.6/81.

^{47/} IASI document 3841 (COINS).

^{48/} IASI document 4921.

^{49/} United Nations document E/CN.11/ASTAT/Conf.6/L.4.

^{50/} United Nations document Conf. Eur. Stats/WG.6/97.

^{51/} United Nations document E/CN.11/ASTAT/Conf.6/L.10.

Tabulation 10 (Basic). POPULATION BY PLACE OF BIRTH, AGE AND SEX

Population included: total population.

Geographic classification: (a) total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications

(a) Place of birth (paras. 254-260): native-born, foreign-born, not stated.

(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. 267): male, female.

Use of the tabulation

1. 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 1 year of age is useful for studying relative under-enumeration of foreign-born and native-born infants.

Changes from 1960 United Nations recommendations

2. No changes.

3. Note: This tabulation was recommended in the 1960 European Programme for National Population Censuses (tab. 8, first priority)^{52/} and the Program of the 1960 Census of America (minimum tab. 6).^{53/} Both the Conference of Asian

^{52/} United Nations document Conf. Eur. Stats/WG.6/81.

^{53/} IASI document 3841 (COINS).

Statisticians^{54/} and the Working Group on Censuses of Population and Housing of the Conference of European Statisticians^{55/} have recommended that place of birth should be on the basic list of topics to be investigated in the 1970 censuses.⁷

Tabulation 11 (Basic). FOREIGN-BORN POPULATION BY COUNTRY OF BIRTH, AGE AND SEX

Population included: foreign-born population.

Geographic classification: (a) total country, (b) each major civil division.

Attribute classifications

(a) Country of birth (paras. 254-260): 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.

(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. 267): male, female.

Use of tabulation

1. 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 cross-classification by sex and age can be used with fertility and mortality statistics in estimating the size of particular ethnic groups at future dates. 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.

Changes from 1960 United Nations recommendations

2. In the 1960 recommendation, this tabulation was assigned second priority because it was felt that it involved rather expensive and elaborate compilation

^{54/} United Nations document E/CN.11/686.

^{55/} United Nations document Conf. Eur. Stats/WG.6/97.

procedures. With the recent developments in data-processing techniques, it is now considered that this drawback is no longer serious, and that this tabulation should have higher priority.

3. Note: This tabulation was recommended in the 1960 European Programme for National Population Censuses (tab. 9, first priority)^{56/} and the Program of the 1960 Census of America (expanded tab. 1).^{57/} The Working Group of Censuses of Population and Housing of the Conference of European Statisticians has recommended that the topic of country of birth of the foreign-born retain first priority in the 1970 recommendations.^{58/}]

Tabulation 12 (Basic). POPULATION BY CITIZENSHIP, AGE AND SEX

Population included: total population.

Geographic classification: (a) total country, (b) each major civil division.

Attribute classifications

(a) Citizenship (paras. 183-187): citizen, alien, not stated.

(b) Age (paras. 176-178): 0-4, 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. 267): male, female.

* The age group which includes the age-limit for voting may usefully be subdivided to show persons who have attained voting age.

Use of the tabulation

1. 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-born persons are citizens by birth and

^{56/} United Nations document Conf. Eur. Stats/WG.6/81.

^{57/} IASI document 3841 (COINS).

^{58/} United Nations document Conf. Eur. Stats/WG.6/97.

naturalization is not unduly difficult, the data can be of use in the study of the rate of assimilation of the foreign-born population.

Changes from 1960 United Nations recommendations

2. No changes.

3. Note: This tabulation has been recommended in the 1960 European Programme for National Population Censuses (tab. 11, first priority)^{60/} and the Program of the 1960 Census of America (minimum tab. 8)^{61/} and the collection of information on citizenship as a basic topic in the 1970 censuses has been recommended by the Working Group on Censuses of Population and Housing of the Conference of European Statisticians.^{62/} The Conference of Asian Statisticians has transferred the topic to the additional list because it is not of universal interest in the region.^{63/}]

^{59/} Note deleted.

^{60/} United Nations document Conf. Eur. Stats/WG.6/81.

^{61/} IASI document 3841 (COINS).

^{62/} United Nations document Conf. Eur. Stats/WG.6/97.

^{63/} United Nations document E/CN.11/686.

Tabulation 13 (Basic). POPULATION ... YEARS OF AGE AND OVER BY TYPE OF ACTIVITY,
AGE AND SEX

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

Geographic classification: (a) total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Type of activity (paras. 194-199): economically active, not economically active, not stated.

(b) Age (paras. 176-178): 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.

(c) Sex (para. 267): male, female.

Use of the tabulation:

1. 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.
2. 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.

Changes from 1960 United Nations recommendations:

3. No changes.

4. Note: This tabulation is found in the 1960 European Programme for National Population Censuses (tab. 19, first priority), ^{64/} in the Program of the 1960 Census

of America (minimum tab. 12),^{65/} and in the Inter-American Program of Basic Statistics (tab. I.A.2.1).^{66/} Economically active population by sex and age group is included in the Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East.^{67/} The Resolution concerning Statistics of the Labour Force, Employment and Under-employment adopted by the Eighth International Conference of Labour Statisticians calls for census benchmark data on the labour force by sex and age.^{68/} The proportions in the labour force of total population, of persons under fifteen years of age and of persons sixty-five years of age and over are suggested by the United Nations as basic background information necessary for the interpretation of levels of living.^{69/}

Tabulation 14 (Basic). EMPLOYED AND UNEMPLOYED POPULATION BY AGE AND SEX

Population included: economically active population.

Geographic classification: (a) total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

- (a) Functional categories (paras. 200-201): employed, unemployed, not stated.
- (b) Age (paras. 176-178): 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.
- (c) Sex (para. 267): male, female.

Use of the tabulation:

1. This tabulation 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.

^{65/} IASI document 3841 (COINS).

^{66/} IASI document 4921.

^{67/} United Nations document E/CN.11/ASTAT/Conf.6/L.4.

^{68/} International Labour Office, op. cit.

^{69/} International Definition and Measurement of Levels of Living (United Nations publication, Sales No.: 61.IV.7) paragraph 53.

Changes from 1960 United Nations recommendations:

2. The classification of the economically active population as employed or unemployed was suggested as an item of lesser priority in the 1960 recommendations. It is now recommended as a basic tabulation because of the need for the data in policy planning.

3. Note: This tabulation is found in the 1960 European Programme for National Population Censuses (tab. 20, second priority),^{70/} in the Program of the 1960 Census of America (expanded tab. 10),^{71/} and in the Inter-American Program of Basic Statistics (tab. I.A.2.2).^{72/} A tabulation of the economically active population according to whether or not employed, sex, status and industry is included in Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East.^{73/} The Report of the Conference of Asian Statisticians (Sixth Session) contains a statement of the great value of statistics on the number of unemployed persons and mentions that they may serve as benchmark figures in connexion with the results of periodic labour force sample surveys.^{74/} The proportion of unemployed persons to the total labour force is one of the indicators of the level of living specified in International Definition and Measurement of Levels of Living.^{75/}

Tabulation 15 (Basic). ECONOMICALLY ACTIVE POPULATION BY INDUSTRY, AGE AND SEX

Population included: economically active population.

Geographic classification: total country. Distinguish urban and rural (paras. 274-278).

^{70/} United Nations document Conf. Eur. Stats/WG.6/81.

^{71/} IASI document 3841 (COINS).

^{72/} IASI document 4921.

^{73/} United Nations document E/CN.11/ASTAT/Conf.6/L.4.

^{74/} United Nations document E/CN.11/686.

^{75/} Op. cit., paras. 29-30.

Attribute classifications:

(a) Industry (paras. 202-203): according to, or convertible to, the latest revision of the United Nations International Standard Industrial Classification of All Economic Activities (ISIC), at least to the major (two digit) groups.

(b) Age (paras. 176-178): 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.

(c) Sex (para. 267): male, female.

Use of the tabulation:

1. In addition to the picture they present of the age-sex distribution of the population in particular occupations and industries, tabulations 15 and 16 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.

Changes from 1960 United Nations recommendations:

2. The 1960 recommendation called for industry categories according to, or convertible to, at least the nine divisions of ISIC; the present recommendation calls for categories according to, or convertible to, at least the forty-five major groups of ISIC, thus providing more detailed information for analytical purposes.

3. Note: This tabulation is found in the 1960 European Programme for National Population Censuses (tab. 25, first priority)^{76/} and in the Program of the 1960 Census of America (minimum tab. 14);^{77/} in the latter, however, the industry categories are the nine (one-digit) divisions of ISIC. It is also included in the Inter-American Program of Basic Statistics (tab. I.A.2.4)^{78/} but with the industry

^{76/} United Nations document Conf. Eur. Stats/WG.6/81.

^{77/} IASI document 3841 (COINS).

^{78/} IASI document 4921.

categories not specified. The Working Group on Censuses of Population and Housing of the Conference of Asian Statisticians has recommended the inclusion of a tabulation of population by industry, age and sex in the 1970 censuses of countries in the ECAFE region.^{79/}

Tabulation 16 (Basic). ECONOMICALLY ACTIVE POPULATION BY OCCUPATION, AGE AND SEX

Population included: economically active population.

Geographic classification: total country. Distinguish urban and rural (paras. 274-278).

Attribute classifications:

(a) Occupation (paras. 204-205): according to, or convertible to, the latest revision of the International Labour Office International Standard Classification of Occupations (ISCO), at least to the minor (two digit) groups.

(b) Age (paras. 176-178): 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.

(c) Sex (para. 267): male, female.

Use of the tabulation:

1. Since they are inextricably related, a discussion of the uses of this tabulation is set forth together with those of tabulation 15.

Changes from 1960 United Nations recommendations:

2. The 1960 recommendation called for occupation categories according to, or convertible to, at least the major groups of ISCO; the present recommendation calls for categories according to, or convertible to, at least the minor groups of ISCO, thus providing more detailed information for analytical purposes.

3. Note: This tabulation is found in the 1960 European Programme for National Population Censuses (tab. 22, first priority)^{80/} and in the Program of the 1960 Census of America (minimum tab. 13);^{81/} in the latter, however, the occupation

^{79/} United Nations document E/CN.11/ASTAT/Conf.6/L.10.

^{80/} United Nations document Conf. Eur. Stats/WG.6/81.

^{81/} IASI document 3841 (COINS).

categories are the ten major (one-digit) groups of the Occupational Classification for the 1960 Census of America. It is also included in the Inter-American Program of Basic Statistics (tab. I.A.2.3)^{82/} but with the occupation categories not specified. The Working Group on Censuses of Population and Housing of the Conference of Asian Statisticians has recommended that a tabulation of population by occupation, age and sex be included in the 1970 censuses of countries of the ECAFE region.^{83/7}

Tabulation 17 (Basic). ECONOMICALLY ACTIVE POPULATION BY STATUS, AGE AND SEX

Population included: economically active population.

Geographic classification: total country. Distinguish urban and rural (paras. 274-278).

Attribute classifications:

(a) Status (para. 206): employer, own-account worker, employee, family worker (further classified, if possible, as paid or unpaid), member of producers' co-operative, not classifiable by status.

(b) Age (paras. 176-178): 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.

(c) Sex (para. 267): male, female.

Use of the tabulation:

1. 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.

2. 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.

^{82/} IASI document 4921.

^{83/} United Nations document E/CN.11/ASTAT/Conf.6/L.10.

Changes from 1960 United Nations recommendations:

3. This tabulation was assigned lesser priority in the 1960 recommendations. It is now recommended as a basic tabulation because of its usefulness in the determination of socio-economic status and in international analysis of activity rates for females.

4. Notes: This tabulation is included in the 1960 European Programme for National Population Censuses (tab. 27, second priority),^{84/} in the Program of the 1960 Census of America (minimum tab. 15)^{85/} and in the Inter-American Program of Basic Statistics (tab. I.A.1.5).^{86/} The Working Group on Censuses of Population and Housing of the Conference of Asian Statisticians has recommended its inclusion in the 1970 censuses of countries in the ECAFE region.^{87/}

Tabulation 18 (Basic). ECONOMICALLY ACTIVE POPULATION BY STATUS, INDUSTRY AND SEX

Population included: economically active population.

Geographic classification: (a) total country (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Status (para. 206): employer, own-account worker, employee, family worker (further classified, if possible, as paid or unpaid), member of producers' co-operative, not classifiable by status.

(b) Industry (paras. 202-203): according to, or convertible to, the latest revision of the United Nations International Standard Industrial Classifications of All Economic Activities (ISIC), at least to the major (two digit) groups.

(c) Sex (para. 267): male, female.

^{84/} United Nations document Conf. Eur. Stats/WG.6/81.

^{85/} IASI document 3841 (COINS).

^{86/} IASI document 4921.

^{87/} United Nations document E/CN.11/ASTAT/Conf.6/L.10.

Use of the tabulation:

1. Tabulations 18, 19 and 31 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 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.
2. In planning for the development and expansion of an educational system and efficient utilization of manpower resources, studies are needed which assess present and future requirements of labour in different industries and occupations.
3. 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 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 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 family workers who are typical of cottage-type industry.
4. Data on the number of wages and salary workers in different industries are often needed as benchmark data for current statistics obtained from establishment reports.

Changes from 1960 United Nations recommendations:

5. The 1960 recommendation called for industry categories according to, or convertible to, at least the nine divisions of ISIC; the present recommendation calls for categories according to or convertible to at least the forty-five major groups of ISIC, thus providing more detailed information for analytical purposes.

6. Note: This tabulation was recommended in the 1960 European Programme for National Population Censuses (tab. 29, first priority),^{88/} and a similar tabulation is included in the Program of the 1960 Census of America (expanded tab. 8),^{89/} except that the industry categories specified in COTA are only the nine (one-digit) divisions of ISIC. Both the Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East^{90/} and the Inter-American Program of Basic Statistics (tab. I.A.2.7)^{91/} call for a cross-classification of status, industry and sex but neither specifies the detail of the industry classification to be used. There is apparently, however, an increased awareness of the need for using the two-digit classification. The Working Group on Censuses of Population and Housing of the Conference of Asian Statisticians has recommended that a tabulation of the population by status, industry and sex be included in the 1970 censuses of countries in the ECAFE region.^{92/7}

Tabulation 19 (Basic). ECONOMICALLY ACTIVE POPULATION BY STATUS, OCCUPATION AND SEX

Population included: economically active population.

Geographic classification: (a) total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

^{88/} United Nations document Conf. Eur. Stats/WG.6/81.

^{89/} IASI document 3841 (COINS).

^{90/} United Nations document E/CN.11/ASTAT/Conf.6/L.4.

^{91/} IASI document 4921.

^{92/} United Nations document E/CN.11/ASTAT/Conf.6/L.10.

Attribute classifications:

(a) Status (para. 206): employer, own-account worker, employee, family worker (further classified, if possible, as paid or unpaid), member of producer's co-operative, not classifiable by status.

(b) Occupation (paras. 204-205): according to, or convertible to, the latest revision of the International Labour Office International Standard Classification of Occupations (ISCO), at least to the minor (two digit) groups.

(c) Sex (para. 267): male, female.

Use of the tabulation:

1. Since they are inextricably related, a discussion of the uses of this tabulation is set forth together with those of tabulation 18.

Changes from 1960 United Nations recommendations:

2. The 1960 recommendation called for occupation categories according to, or convertible to, at least the ten major groups of ISCO; the present recommendations call for categories according to, or convertible to, at least the seventy-three minor groups of ISCO, thus providing more detailed information for analytical purposes.

3. Note: This tabulation is recommended in the 1960 European Programme for National Population Censuses (tab. 28, first priority).^{93/} The analogous tabulation in the Program for the 1960 Census of America (expanded tab. 9) specifies only the ten major (one-digit) groups of the Occupational Classification for the 1960 Census of America.^{94/} Both the Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East^{95/} and the Inter-American Program of Basic Statistics (tab. I.A.2.6)^{96/} call for a cross-classification of status, occupation and sex but neither specifies the categories of the occupational classification to be used. There is apparently, however, an increased awareness of the need for using the two-digit classification. The Working Group on Censuses of Population and Housing of the Conference of Asian Statisticians

^{93/} United Nations document Conf. Eur. Stats/WG.6/81.

^{94/} IASI document 3841 (COINS).

^{95/} United Nations document E/CN.11/ASTAT/Conf.6/L.4.

^{96/} IASI document 4921.

has recommended that a tabulation of the population by status, industry and sex be included in the 1970 censuses of countries in the ECAFE region.^{97/} The ECAFE Working Group on Censuses of Population and Housing has recommended that the tabulation of population by status, occupation and sex be included in the 1970 censuses of countries in the ECAFE region.⁷

Tabulation 20 (Basic). ECONOMICALLY ACTIVE FEMALE POPULATION BY MARITAL STATUS AND AGE

Population included: economically active female population.

Geographic classification: (a) total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Marital status (paras. 249-253): single, married, widowed, divorced, separated, not stated.

(b) Age (paras. 176-178): 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.

Use of the tabulation:

1. These data, together with those from the tabulation of the total female population by marital status and age, 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, these data indicate the marital status groups in which untapped sources of female labour supply can be found.

^{97/} United Nations document E/CN.11/ASTAT/Conf.6/L.10.

Changes from 1960 United Nations recommendations:

2. This tabulation was not previously included. The 1960 recommendations, however, contained a second priority tabulation of the economically active population of both sexes by occupation, marital status, sex and age, which is also recommended here as additional tabulation 32. The present tabulation is considered to furnish the most important information on economic characteristics in relation to marital status provided by tabulation 32 and involves a less elaborate compilation procedure. It does not, however, provide an appropriate denominator for marriage and divorce rates specific for occupation and sex.

3. Note: The tabulation of the economically active population by occupation, marital status, age and sex was recommended in the 1960 European Programme for National Population Censuses (tab. 23, second priority)^{98/} and the Program of the 1960 Census of America (expanded tab. 5);^{99/} it is also included in the Inter-American Program of Basic Statistics (tab. I.A.2.12).^{100/} As stated above, it is considered that the present tabulation furnishes the most important information which is obtained from the more detailed cross-classification of occupation, age and sex.7

Tabulation 21 (Basic). POPULATION 10 YEARS OF AGE AND OVER BY LITERACY, AGE AND SEX

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

Geographic classification: (a) total country, (b) each major civil division. Distinguish urban and rural for (a) and (b).

Attribute classifications:

(a) Literacy (paras. 238-241): literate, illiterate, not stated.

(b) Age (paras. 176-178): 10-14, 15-19, 20-24, 25-34, 35-44, 45-54, 55-64, 65 and over.

(c) Sex (para. 267): male, female.

^{98/} United Nations document Conf. Eur. Stats/WG.6/81.

^{99/} IASI document 3841 (COINS).

^{100/} IASI document 4921.

Use of the tabulation:

1. 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.
2. 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.
3. 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.
4. 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 which will be undertaken by UNESCO with the support of the United Nations.^{101/} An experimental mass literacy programme will be conducted by UNESCO beginning in 1966.

Changes from 1960 United Nations recommendations:

5. The lower age limit of the population included has been reduced from 15 years to 10 years and the age groups beginning at age 25 have been consolidated, in accordance with the UNESCO Recommendation Concerning the International Standardization of Educational Statistics, adopted by the General Conference at its tenth session, Paris, 3 December 1958.
6. Note: This tabulation is part of the UNESCO Recommendation Concerning the International Standardization of Educational Statistics.^{102/} A similar tabulation for population 15 years of age and over, with age classified in 5-year groups, is included in the 1960 European Programme for National Population Censuses (tab. 38, first priority),^{103/} in the Program for the 1960 Census of America (minimum tab. 10)^{104/} and in the Inter-American Program of Basic Statistics (tab.I.A.1.9).^{105/}

^{101/} Official Records of the General Assembly, Eighteenth Session, Supplement No. 15 (A/5515), resolution 1937 (XVIII), pp. 28-29.

^{102/} UNESCO, op.cit.

^{103/} United Nations document Conf. Eur. Stats/WG.6/81.

^{104/} IASI document 3841 (COINS).

^{105/} IASI document 4921.

A tabulation of population by literacy, age and sex is recommended in the Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East.^{106/} The Working Group on Censuses of Population and Housing of the Conference of Asian Statisticians has recommended that literacy be included as a basic topic in the 1970 censuses.^{107/} The Working Group on Censuses of Population and Housing of the Conference of European Statisticians has agreed that the topic should be included in the 1970 censuses of European countries but as an additional, rather than a first priority, topic because it is not of interest to many of the countries with a high level of literacy. The Working Group has also suggested that attention be drawn to the desirability of sub-dividing the illiterate persons to distinguish those who can read but not write from those who can neither read nor write.^{108/} This suggestion has not been adopted here because it is felt that the distinction serves no practical purpose.⁷

Tabulation 22 (Basic). POPULATION 25 YEARS OF AGE AND OVER BY EDUCATIONAL ATTAINMENT, AGE AND SEX

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

Geographic classification: (a) total country, (b) each major civil division. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

- (a) Educational attainment (paras. 216-220):
 - (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;

^{106/} United Nations document E/CN.11/ASTAT/CONF.6/L.4.

^{107/} United Nations document E/CN.11/ASTAT/CONF.6/L.10.

^{108/} United Nations document Conf. Eur. Stats/WG.6/97.

- (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.

(b) Age (paras. 176-178): 25-34, 35-44, 45-54, 55-64, 65 and over, not stated.

(c) Sex (para. 267): male, female.

Use of the tabulation:

1. 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.

Changes from 1960 United Nations recommendations:

2. The terminology has been changed. The term "educational attainment" has been substituted for "level of education" because the tabulation covers not only the level of schooling but also the highest grade completed within the level. This term and the terms now used to designate the various levels are in accordance with the UNESCO Recommendation Concerning the International Standardization of Educational Statistics.

3. An additional category of special education (not classified by level) and a distinction between different types of education at the second and third levels have been introduced, in accordance with the UNESCO recommendation.

/...

4. With the understanding that information for persons 15-24 years of age will appear in a separate tabulation (see tabulation 23), the lower age limit for the present tabulation has been raised to 25 years; the number of age categories has been extended to provide 10-year age groups for persons 25 years of age and over. This age classification is in accordance with the UNESCO recommendation.

5. Note: This tabulation, for all persons 15 years of age and over, forms part of the UNESCO Recommendation Concerning the International Standardization of Educational Statistics.^{109/} A similar tabulation, but with age groups "under 10 years, 10-14, 15-19, 20-24, and 25 and over" is included in the Program for the 1960 Census of America (minimum tab. 10).^{110/} In the Inter-American Program of Basic Statistics (tab. I.A.1.11), it is indicated that the tabulation should be made for persons 15 years of age and over, classified by 5-year age groups, with the use of a lower minimum age to be determined according to national interests.^{111/} The tabulation of population by educational attainment, age and sex is included in the Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East.^{112/} The 1960 European Programme for National Population Censuses included such a tabulation for persons above the minimum school-leaving age (tab. 39, first priority);^{113/} the Working Group on Censuses of Population and Housing of the Conference of European Statisticians has recommended its retention for the 1970 censuses and has also agreed on an extended (optional) tabulation on the same topic which would also distinguish between persons in full-time attendance at a regular educational institution and other persons.^{114/}

^{109/} UNESCO, op. cit.

^{110/} IASI document 3841 (COINS).

^{111/} IASI document 4921.

^{112/} United Nations document E/CN.11/ASTAT/CONF.6/L.4.

^{113/} United Nations document Conf. Eur. Stats/WG.6/81.

^{114/} United Nations document Conf. Eur. Stats/WG.6/97.

Tabulation 23 (Basic). POPULATION ...* TO 24 YEARS OF AGE BY SCHOOL ATTENDANCE,
EDUCATIONAL ATTAINMENT, AGE AND SEX

Population included: all persons between the usual age for entering the first level of school and 24 years of age.

Geographic classification: (a) total country, (b) each major civil division.

Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) School attendance (paras. 265-266): attending school, not attending school, not stated.

(b) Educational attainment (paras. 216-220):

- (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): ...* to 9, 10-14, 15-19, 20-24, not stated (but under 25).

(d) Sex (para. 267): male, female.

Use of the tabulation:

1. 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

* The lower age limit should be the usual age for entrance into the first level of school.

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.

2. 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 24), classification by 5-year age groups is considered satisfactory for the present tabulation.

3. 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 all 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.

Changes from 1960 United Nations recommendations:

4. For changes in terminology, see tabulation 22.

5. The 1960 recommendation did not specify the cross-classification of school attendance and educational attainment, although it was mentioned as being desirable. Allowance has been made for variation in the lower age limit for tabulation of the data, according to the usual age for entrance into the first level of school in the particular country.

6. Note: The UNESCO recommendations concerning the educational achievement of pupils relate to data obtained from educational institutions and therefore do not call for the category of persons not attending school; for the same reason, information is requested on level and grade presently attended rather than highest grade completed.

/...

7. A tabulation of the population attending regular educational institutions, according to educational attainment, age and sex, was recommended in the Program of the 1960 Census of America (expanded tab. 4); the age classification comprised single-year-of-age categories from 5 to 19 years, 5-year categories from 20 to 29, and a residual category of 30 years and over.^{115/} A similar tabulation is included in the Inter-American Program of Basic Statistics (tab. I.A.1.11).^{116/} The Conference of Asian Statisticians has recommended the collection of data on level of education, as a basic topic, and on school attendance, as an additional topic, in the 1970 censuses.^{117/} The Conference of European Statisticians has not recommended the collection of data on educational attainment for persons below the minimum school-leaving age because such data are normally available in current educational statistics of most European countries.⁷

Tabulation 24 (Basic). POPULATION ...^{*/} TO 24 YEARS OF AGE, BY SCHOOL ATTENDANCE, AGE AND SEX

Population included: all persons between the usual age for entering the first level of school and twenty-four years of age.

Geographic classification: (a) total country, (b) each major civil division.

Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) School attendance (paras. 265-266): attending school, not attending school, not stated.

(b) Age (paras. 176-178): 5*, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, not stated (but under 25).

(c) Sex (para. 267): male, female.

^{115/} IASI document 3841 (COINS).

^{116/} IASI document 4921.

^{117/} United Nations document E/CN.11/686.

^{*/} The lower age limit should be the usual age for entrance into the first level of school.

Use of the tabulation:

1. 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 which 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.
2. 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.

Changes from 1960 United Nations recommendations:

3. Allowance has been made in the present recommendation for variation in the lower age limit for tabulation of the data, according to the usual age for entrance into the first level of school in the particular country. Single-year-of-age categories have been extended to age twenty-four in order to provide additional detail on school attendance at individual ages.
4. Note: The UNESCO recommendations concerning the age distribution of pupils relate to data obtained from educational institutions and therefore do not call for the category of persons not attending school. A classification by single years of age from 5 to 24 years, inclusive, is recommended.^{118/}
5. The tabulation of population 5-24 years of age, by single years of age through 14 years and 5-year age groups between 15 and 24 years, cross-classified by school attendance, is found in the 1960 European Programme for National Population Censuses (tab. 40, second priority).^{119/} The tabulation in the Program of the 1960 Census of

^{118/} UNESCO, op. cit.

^{119/} United Nations document Conf. Eur. Stats/WG.6/81.

America (minimum tab. 11) specifies single years of age through 19 years and 5-year groups through 29 years.^{120/} The Inter-American Program of Basic Statistics (tab. I.A.1.11) calls for a cross-classification of age and level of education for the population attending regular educational institutions, in which age is given in the same categories but with the addition of a final category of persons 30 years of age and over.^{121/7}

^{120/} IASI document 3841 (COINS).

^{121/} IASI document 4921.

Tabulation 25 (Basic). POPULATION BY ETHNIC GROUP, AGE AND SEX

Population included: total population.

Geographic classification: (a) total country, (b) each major civil division.

Classifications:

(a) Ethnic group (para. 221): each group for which separate information is required, all others, not stated.

(b) 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.

(c) Sex (para. 267): male, female.

Use of the tabulation:

1. For countries which are not ethnically homogenous, this tabulation provides the basic information for a quantitative assessment of the relative size and age distribution of the different 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.

Changes from 1960 United Nations recommendations:

2. The term "ethnic nationality" has been deleted from this tabulation because of its possible confusion with "legal nationality".

3. Note: A tabulation of population by ethnic or nationality group, age and sex was recommended in the 1960 European Programme for National Population Censuses (tab. 37, first priority).^{122/} The Conference of Asian Statisticians has recommended that the topic be included on the basic list of topics for the 1970 censuses in the ECAFE region.^{123/} The Working Group on Censuses of Population

^{122/} United Nations document Conf. Eur. Stats/WG.6/81.

^{123/} United Nations document E/CN.11/686.

and Housing of the Conference of European Statisticians has deleted the reference to "nationality" and has recommended the transfer of the topic from the basic list to the additional list for the 1970 censuses in the ECE region because it is of interest to only a few European countries.^{124/} For the present United Nations recommendation, however, the priority has been maintained because of the importance of data on ethnic groups in many developing countries.⁷

Tabulation 26 (Basic). FEMALE POPULATION 15 YEARS OF AGE AND OVER BY AGE AND NUMBER OF CHILDREN BORN ALIVE

Population included: female population 15 years of age and over.

Geographic classification: (a) total country, (b) each major civil division.

Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Age (paras. 176-178): 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.

(b) Number of children born alive (paras. 179-182): 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:

1. 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.

2. The principle measures of fertility which can be derived from this tabulation are (1) the gross fertility ratio (average number of children born alive to women of child-bearing age and over), (2) the average number of children born alive to

^{124/} United Nations document Conf. Eur. Stats/WG.6/97.

women who have reached the end of the child-bearing period (i.e., 50 years and over), (3) the proportion of women who have had no children by the end of their reproductive life, (4) the average number of children born per woman who has already borne at least one child and (5) cumulative average gross fertility ratios by age groups.

3. 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.

Changes from 1960 United Nations recommendations:

4. The categories of number of children have been reduced to eleven from the previous fourteen, so that the final category is now "10 and over". The frequencies beyond nine children are not usually large enough to warrant separate categories.

5. The necessity for an indication of the aggregate number of children born alive to all women in each age category has been mentioned. Because the recommended classification of number of children born alive is an open-end classification, the aggregate number of children born alive to women in each age group cannot be directly derived from it. Since this aggregate is needed for the computation of many of the fertility measures mentioned above, it is essential that it be provided in the tabulation.

6. Note: This tabulation can be found in the 1960 European Programme for National Population Censuses (tab. 41, first priority),^{125/} the Program for the 1960 Census of America (expanded tab. 17)^{126/} and the Inter-American Program of Basic Statistics (tab. I.A.1.8).^{127/} The collection of information in the 1970 censuses on number of children born alive has been recommended by the Conference of Asian Statisticians^{128/} and the Working Group on Censuses of Population and Housing of the Conference of European Statisticians.^{129/7}

^{125/} United Nations document Conf. Eur. Stats/WG.6/81.

^{126/} IASI document 3841 (COINS).

^{127/} IASI document 4921.

^{128/} United Nations document E/CN.11/686.

^{129/} United Nations document Conf. Eur. Stats/WG.6/97.

(2) Additional tabulation

Tabulation 27 (Additional). POPULATION IN PRIVATE HOUSEHOLDS BY RELATIONSHIP TO HEAD OF HOUSEHOLD, MARITAL STATUS AND SEX

Population included: all members of private households.

Geographic classification: (a) total country, (b) each major and minor civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Relationship to head of household (paras. 232-234): head, spouse, child, spouse of child, grandchild or great-grandchild, parent or parent of spouse, other relative, boarder, servant, other person not related to the head, not stated.

(b) Marital status (paras. 249-253): single, married, widowed, divorced, separated, not stated.

(c) Sex (para. 267): male, female.

Use of the tabulation:

1. This relatively simple 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, which is useful in the preparation of projections of the number of households.

Changes from 1960 United Nations recommendations:

2. This tabulation was not previously included.

3. Note: This tabulation, with a somewhat curtailed classification of relationship, was included in the Program of the 1960 Census of America (expanded tab. 13).^{130/} Although the collection of information on relationship to the head

^{130/} IASI document 3841 (COINS).

of the household, and a classification similar to that employed in this tabulation, was recommended in the 1960 European Programme for National Population Censuses,^{131/} there was no recommendation for a tabulation directly showing the classification.⁷

Tabulation 28 (Additional). NATIVE-BORN POPULATION BY MAJOR ADMINISTRATIVE DIVISION OF BIRTH, AGE AND SEX

Population included: all persons born in the country.

Geographic classification: (a) total country, (b) each major civil division.

Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Place of birth (paras. 254-260): each major administrative division of the country, not stated.

(b) Age (paras. 176-178): 0-4, 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. 267): male, female.

Use of the tabulation:

1. 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 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.

^{131/} United Nations document Conf. Eur. Stats/WG.6/81.

Changes from 1960 United Nations recommendations:

2. This tabulation had first priority in the 1960 recommendations. It is now relegated to a lower priority because it is felt that more useful information can be provided by the tabulation of population by duration of residence (tabulation 4).

3. Note: This tabulation appears in the 1960 European Programme for National Population Censuses (tab. 10, first priority),^{132/} in the Program of the 1960 Census of America (minimum tab. 7)^{133/} and in the Inter-American Program of Basic Statistics (tab. I.A.1.5)^{134/} but, in the last named, there is no provision for the classification by age. The Working Group on Censuses of Population and Housing of the Conference of European Statisticians recommended that this topic be assigned only second priority in the 1970 recommendations because, in many European countries, studies of internal migration are based on data on prior place of residence (e.g. at the time of the previous census) although some countries still require the present tabulation.^{135/7}

Tabulation 29 (Additional). ALIEN POPULATION BY COUNTRY OF CITIZENSHIP, AGE AND SEX

Population included: alien population.

Geographic classification: (a) total country, (b) each major civil division.

Attribute classifications:

(a) Country of citizenship (paras. 183-187): 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, continent not known.

(b) Age (paras. 176-178): 0-4, 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. 267): male, female.

^{132/} United Nations document Conf. Eur. Stats/WG.6/81.

^{133/} IASI document 3841 (COINS)

^{134/} IASI document 4921.

^{135/} United Nations document Conf. Eur. Stats/WG.6/97.

Use of tabulation:

1. This tabulation 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.
2. In conjunction with country-of-birth statistics, they can be used to determine comparative rates of naturalization among foreign-born persons.

Changes from 1960 United Nations recommendations:

3. No changes.
4. Note: This tabulation was recommended in the 1960 European Programme for National Population Censuses (tab. 12, second priority)^{136/} and the Working Group on Censuses of Population and Housing of the Conference of European Statisticians has agreed that no changes are needed in the classification of the topic citizenship.^{137/} The tabulation of the alien population by citizenship and sex was recommended in the Program of the 1960 Census of America (expanded tab. 2).^{138/7}

Tabulation 30 (Additional). POPULATION NOT ECONOMICALLY ACTIVE, BY FUNCTIONAL CATEGORIES, AGE AND SEX

Population included: population not economically active.

Geographic classification: (a) total country, (b) each major civil division.

Attribute classifications:

(a) Functional categories (paras. 198-199): home-maker, student, person in institution, income-recipient, other, not stated.

(b) Age (paras. 176-178): 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.

(c) Sex (para. 267): male, female.

^{136/} United Nations document Conf. Eur. Stats/WG.6/81.

^{137/} United Nations document Conf. Eur. Stats/WG.6/97.

^{138/} IASI document 3841 (COINS).

Use of the tabulation:

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

Changes from 1960 United Nations recommendations:

2. No changes.

3. Note: Analogous tabulations are those of the 1960 European Programme for National Population Censuses (tab. 21, second priority), ^{139/} the Program of the 1960 Census of America (expanded tab. 11) ^{140/} and the Inter-American Program of Basic Statistics (tab. I.A.2.14). ^{141/} The Working Group on Censuses of Population and Housing of the Conference of Asian Statisticians ^{142/} has recommended the inclusion of this tabulation in the 1970 censuses in the ECAFE region. ⁷

Tabulation 31 (Additional). ECONOMICALLY ACTIVE POPULATION BY INDUSTRY, OCCUPATION AND SEX

Population included: economically active population.

Geographic classification: (a) total country, (b) each major civil division, (c) each principal locality. Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Industry (paras. 202-203): according to, or convertible to, the latest revision of the United Nations International Standard Industrial Classification of All Economic Activities (ISIC), at least to the major (two digit) groups. ^{*}

^{139/} United Nations document Conf. Eur. Stats/WG.6/81.

^{140/} IASI document 3841 (COINS).

^{141/} IASI document 4921.

^{142/} United Nations document E/CN.11/ASTAT/Conf.6/L.10.

^{*} If the detailed cross-classification according to the major groups of ISCO and the minor groups of ISIC is not feasible, the divisions (one digit) of ISIC may be substituted, but the minor groups of ISCO should be retained because the detailed occupation data are of greater utility than the detailed industry data.

(b) Occupation (paras. 204-205): according to, or convertible to, the latest revision of the International Labour Office International Standard Classification of Occupations (ISCO), at least to the minor (two digit) groups.

(c) Sex (para. 267): male, female.

Use of the tabulation:

1. Since they are inextricably related, a discussion of the uses of this tabulation is set forth together with those of tabulation 18.

Changes from 1960 United Nations recommendations:

2. This tabulation was not recommended previously because of its size, which was considered to be a serious obstacle for many countries, in spite of its great utility for all countries. With the recent advances in data processing techniques, however, it is now considered to be feasible in increasing numbers of censuses.

3. Note: A similar tabulation is recommended in the Program of the 1960 Census of America (expanded tab. 7), which, however, specifies only the ten major (one digit) groups of the Occupational Classification for the 1960 Census of America and the nine (one digit) divisions of ISIC.^{143/} Both the Basic Statistics for Formulating and Implementing Plans of Economic and Social Development in Countries of Asia and the Far East^{144/} and the Inter-American Program of Basic Statistics (tab. I.A.2.8)^{145/} call for a cross-classification of industry, occupation and sex, but neither specifies the detail of the industry and occupation classifications to be used.⁷

Tabulation 32 (Additional). ECONOMICALLY ACTIVE POPULATION BY OCCUPATION, MARITAL STATUS, AGE AND SEX

Population included: economically active population.

Geographic classification: (a) total country, (b) each major civil division.

Distinguish urban and rural for (a) and (b) (paras. 274-278).

^{143/} IASI document 3841 (COINS).

^{144/} United Nations document E/CN.11/ASTAT/Conf.6/L.4.

^{145/} IASI document 4921.

Attribute classifications:

(a) Occupation (paras. 204-205): according to, or convertible to, the latest revision of the International Labour Office International Standard Classification of Occupation (ISCO), at least to the major (one digit) groups.

(b) Marital status (paras. 249-253): single, married, other, not stated.

(c) Age (paras. 176-178): under 15, 15-24, 25-44, 45-64, 65 and over, not stated.

(d) Sex (para. 267): male, female.

Use of the tabulation:

1. 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.

2. The tabulation furnishes the base for computation of marriage and divorce rates by occupation and age and of mortality rates specific for marital status, occupation and age.

3. 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.

4. 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 ten major groups of ISCO, rather than the seventy-three 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.

Changes from 1960 United Nations recommendations:

5. Both the number of marital status categories and the number of age categories have been reduced, thus simplifying the tabulation. The marital status categories of "widowed" and "divorced", previously specified, have been combined into the single category of "other" which also includes the separated. Occupational differentials are not likely to be significant within this category.

6. /Note: The tabulation of the economically active population by occupation, by marital status, age and sex was recommended in the 1960 European Programme for National Population Censuses (tab. 23, second priority)^{146/} and the Program of the 1960 Census of America (expanded tab. 5);^{147/} it is also included in the Inter-American Program of Basic Statistics (tab. I.A.2.12).^{148/7}

Table 33 (Additional). ECONOMICALLY ACTIVE POPULATION BY OCCUPATION,
EDUCATIONAL ATTAINMENT, AGE AND SEX

Population included: economically active population.

Geographic classification: total country.

Attribute classifications:

(a) Occupation (paras. 204-205): according to, or convertible to, the latest revision of the International Labour Offices International Standard Classification of Occupations (ISCO), at least to the minor (two digit) groups.

(b) Educational attainment (paras. 216-220): first level not completed, first level completed, second level completed, third level completed, special education (not classified by level), not stated.

(c) Age (paras. 176-178): under 15, 15-24, 25-44, 45-64, 65 and over, not stated.

(d) Sex (para. 267): male, female.

^{146/} United Nations document Conf. Eur. Stats/WG.6/81.

^{147/} IASI document 3841 (COINS).

^{148/} IASI document 4921.

Use of the tabulation:

1. This tabulation provides the 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.

Changes from 1960 United Nations recommendations:

2. This tabulation was not previously included.

3. Note: This tabulation was recommended in the 1960 European Programme for National Population Censuses (tab. 24, second priority).^{149/} It is included in the Inter-American Program of Basic Statistics (tab. I.A.2.10), with additional detail by grade completed within levels of education but with the categories of the occupation classification not specified.^{150/7}

Tabulation 34 (Additional). FEMALE POPULATION FIFTEEN YEARS OF AGE AND OVER BY AGE, NUMBER OF CHILDREN BORN ALIVE AND EDUCATIONAL ATTAINMENT

Population included: Female population fifteen years of age and over.

Geographic classification: (a) total country, (b) each major civil division.

Distinguish urban and rural for (a) and (b) (paras. 274-278).

Attribute classifications:

(a) Age (paras. 176-178): 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.

(b) Number of children born alive (paras. 179-182): 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.

(c) Educational attainment (paras. 216-220): first level not completed, first level completed, second level completed, third level completed, special education (not classified by level), not stated.

^{149/} United Nations document Conf. Eur. Stats/WG.6/81.

^{150/} IASI document 4921.

Use of the tabulation:

1. This tabulation provides all the measures of fertility which can be derived from tabulation 26 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.

Changes from 1960 United Nations recommendations:

2. This tabulation was not previously included.
3. Note: This tabulation has not so far been recommended by any of the regional bodies.
