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EXPERT GROUP ON A SYSTEM OF DEMOGRAPHIC,

MANPOWER AND SOCIAL STATISTICS

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I. INTRODUCTION

1. The first session of the Expert Group on a System of Demographic, Manpower and Social Statistics was held in Geneva from 13 to 24 July 1970. The experts attending the session were: Mrs. Dmitrieva, USSR; Mr. Fastbom, Sweden; Professor Mahalanobis, India; Mr. Mayer, France; Mrs. Mód, Hungary; Professor Moser, United Kingdom; Mr. Moss, United States; Professor Olson, United States; Mr. Sourrouille, Argentina; Professor Stone, United Kingdom; Mr. Verstege, Netherlands. Other participants in the session were: Mr. Brolin, UNESCO; Dr. Logan, World Health Organization; Mr. Ypsilantis, International Labour Office; and Mr. Vukovich, Social Development Division, United Nations Office at Geneva. Mr. Mayer was elected as chairman of the Expert Group.

2. The main paper considered by the first session of the Expert Group was "An integrated system of demographic, manpower and social statistics and its links with the system of national economic accounts" (E/CN.3/394), prepared by Professor Stone as consultant to the Statistical Office of the United Nations. In addition, the Expert Group had the following supplementary documents and background papers before it: "An integrated system of social and demographic statistics" (Conf.Eur.Stats/273), a memorandum by Professor Moser prepared for the seventeenth plenary session of the Conference of European Statisticians and the "Report of the first session of the Working Group on a System of Demographic and Social Statistics" (Conf.Eur.Stats/WG.34/2); "Notes on basic data and classifications of a system of demographic, manpower and social statistics" prepared by the Statistical Office of the United Nations; "A draft complementary system of statistics on the distribution of income and wealth (E/CN.3/400) and the "Report of the first session; Expert Group on Statistics of the [illegible] Distribution of Income, Consumption and Wealth" (E/CN.3/415), and "On principles for the construction of a system of social and demographic statistics", a paper by Mr. Fastbom.

II. THE OBJECTIVES, SCOPE AND FRAMEWORK OF A SYSTEM

A. The aims

3. The Expert Group considered that the objectives of developing a system of demographic, manpower and social statistics were both substantive and statistical in character.

4. The Expert Group agreed that a system should provide a framework in which the bodies of demographic, manpower and social statistics are co-ordinated so that they may be used in conjunction, one with the other, to describe social conditions and changes in a coherent manner, to define social problems, and to formulate and evaluate social policies and plans. In order to serve these purposes, (i) the data in respect of human stocks (states or circumstances) and flows (changes in states or circumstances) should be correlated; (ii) series in respect of the various facets of the characteristics and circumstances of the population should be defined and classified so as to reveal not only the main factors with which the attributes and experience vary but also the main relationships between the various aspects of social conditions; (iii) the costs of, and the resources employed in, providing social services should be related to the human numbers receiving these services and the output of the services; and (iv) the benefits accruing from these services to various groups of the population should be ascertained. Data in respect of the capacity of the facilities for social services and in respect of other variables in natural (physical) units should be included. The series of data mentioned above would furnish means of (i) describing social conditions and the paths along which these conditions would change, starting from the present situation and given the past and present relationships, (ii) detecting social problems and (iii) estimating the probable effects of given social policies and plans. The data under (iii) and (iv) would be of value in comparing the costs and effectiveness of alternative proposals in respect of social policy. The Group recognized that the factors underlying differences in the characteristics and experience of the population cannot be fully identified in advance.

Special studies would be required before elaborate cross-classifications of data could be developed. Determining the output of, and benefits accruing from, various social services also raises difficult problems of concept and measurement.

5. The Expert Group considered that a system of demographic, manpower and social statistics will be of value for a number of statistical purposes. The series, classifications and tabulations to be included in a system will be of value to governments for purposes of determining gaps, inconsistencies and other deficiencies in their demographic, manpower and social statistics and systematically improving these data. The integration of statistics in respect of human stocks and flows into a coherent framework will facilitate applying many consistency checks to these data.

6. The Group felt that the guidelines of a system should cover (i) its general principles, character and structure, (ii) concepts, definitions and classifications, (iii) the relevant matrices, accounts and other organizing devices and (iv) series and standard accounts and tables. Models and other techniques of using and analysing the data of a system should not be included in the guidelines though (i) it is essential to bear in mind the purposes the data should serve in order to develop a viable and coherent system and (ii) it is valuable to illustrate these uses by presenting examples of the ways in which the data of a system may be used.

7. Since the guidelines are to relate to general-purpose statistics which are likely to be of interest to most countries of the world, only the main series and classification of demographic, manpower and social statistics should be stressed. Countries will find it necessary to select from, or to add to, the suggested data and to decide on the orders of priority of the series in the light of their own requirements and circumstances. The Group noted that this will be the situation particularly, in the case of the developing countries. The guidelines which are developed must necessarily be flexible and tentative not only because of the differences in the social

conditions, institutions and problems of countries, but also because of the lack of national experience with systems of demographic, manpower and social statistics and the national experiments which are being, or will be, undertaken concerning the character and development of such systems.

B. Scope of a system

8. The Expert Group noted that the description of the subject-matter fields of a system in E/CN.3/394 had been limited to certain fields which are considered to be important candidates for inclusion, and that it had not been intended to deal in the document with all the areas of statistics which should be covered.

9. It was agreed that eventually the system should include as completely as is possible all aspects of social relations and care which are carried on outside the family. It was pointed out in this connexion that the classification of government purposes in the SNA provides a comprehensive list of the fields of social statistics which should be covered in a system of demographic, manpower and social statistics. While the subjects discussed in E/CN.3/394 comprise a significant part of the fields to be covered by a system, it is desirable that several other areas of statistics should be added. Various members of the Group stressed that the following fields of statistics in addition to those dealt with in E/CN.3/394, should be included housing, other aspects of the physical environment, social welfare as a whole, all aspects of public safety and order, recreation, cultural services and religion.

10. While the matrix approach in E/CN.3/394 was considered to be valuable for purposes of formulating a coherent system of demographic, manpower and social statistics and for purposes of using and analysing these data, it was agreed that provision should be made for including statistics in the system which may not be suitably accommodated in matrices.

11. It was pointed out that for various purposes it is necessary to have data on time spent in social and economic activities, in terms, for example, of man-years, as well as data on numbers of individuals. It was agreed that provision should also be made for recording time budgets.

12. The Group stressed the importance of covering events which occur during a given year but which begin and end during a number of intervals of the year; and raised the question as to whether the system described in E/CN.3/394 could deal with such events. It was indicated that this could be accomplished by compiling cumulative data relating to the year as a whole, and that the question as to whether matrices are the most effective way of dealing with cumulative data requires further study.

13. The Expert Group recognized that it is necessary to establish an order of priorities in which work on the fields to be included in a complete system should proceed. It was agreed that first priority should be given to those fields which are already covered in E/CN.3/394 and to sub-systems relating to housing and social welfare.

C. Units of observation and measurement

14. The experts agreed that it is necessary to distinguish between the units of observation in respect of which data are to be collected and the units of measurement in terms of which the data are expressed. It was pointed out in this connexion that in the systems of national accounts and balances, use is made of a number of different units of observation, such as organs of government, private non-profit institutions, enterprises, establishments and households, but of a common unit of measurement, namely the monetary unit.

15. The experts agreed that the individual is a key unit of observation in the system of demographic, manpower and social statistics. Groups of persons, such as the family and the household, and various types of

institutions and establishments are also important units of observation. Types of fixed assets and durable consumer goods, such as dwellings, schools, hospitals, theatres and motor cars, are required as units of observation in order to compile information such as the capacity which is available to provide services and the degree to which facilities are utilized. Furthermore events, such as illnesses, accidents and criminal offences, are needed as units of observation in the case of certain sub-systems.

16. The individual is to be a key unit of measurement in the case of many aspects of the system. The family and the household will also be useful units of measurement. The monetary unit is to be the unit of measurement in the case of data concerning the costs and perhaps value of social services and the distribution of income, consumption and wealth. Various types of fixed assets, durable consumer goods, and objects and events are to serve as units of measurement in certain circumstances. Time will be an important unit of measurement in the case of a number of sub-systems. It was agreed that the system should be formulated so as to accommodate all the required units of measurement in respect of social and economic characteristics, circumstances and events.

17. It was pointed out that it is necessary to use various scales in gathering and compiling data and that it is useful to distinguish between nominal, ordinal, interval and ratio scales. Nominal or ordinal measurement consists of specifying the category of a classification to which an observation should be assigned; interval and ratio scales can be used when measurement in quantitative terms is feasible. The Group recognized that it will probably be desirable to use scales of ordinal measurement, in addition to nominal measurement, when it is not feasible to use interval or ratio scales.

D. The character of a system and the integration and linkages of sub-systems

1. The composition of a system

(a) Matrices

18. The Expert Group agreed that matrices furnish an invaluable means of portraying human stocks as of given points of time in relation to flows during the intervening period, and of accounting for these stocks and flows. The stocks may indicate status or circumstances of a population at given points of time and the flows may relate to changes in these conditions between these points of time or to events which take place during the intervening period. Various units of observation and units of measurement may be used in this context. The stocks and flows may be exhibited for a cross-section of a population or for a given cohort of a population over an extended period of time; and transition proportions may be tabulated to measure passage from one state to another. The accounting relations between stocks and flows furnish checks of the consistency of the data; the techniques of input-output analysis may be applied; and information may be compiled concerning the expected succession of states and the time to be spent in each state. Matrices therefore furnish powerful means of organizing data in respect of the past and present for purposes of making projections into the future.

(b) The character of a system

19. The Expert Group however emphasized that in view of the multiple objectives of a system of demographic, manpower and social statistics and the diverse societies to which it should apply, approaches to defining, organizing, tabulating and analysing the data in addition to that set out in E/CN.3/394 should be included in the system. The approaches adopted should be designed to contribute to the following objectives: (i) to enumerate data which are required in sales to describe social conditions and to deal with social problems in the case of societies at different stages of social and economic

development and with different social and economic arrangements; (ii) to co-ordinate the data into a constant whole; (iii) to delineate the significant links and interactions between the various series and fields of statistics, (iv) to articulate the relationships of the relevant parts of the system to the national accounts and balances and (v) to organize and present the data of the system so as to facilitate their uses and analyses in a number of ways.

(c) The requirements of developing countries

20. It was noted that little attention is paid in the documents discussed by the Expert Group to the circumstances and requirements of the developing countries. It is essential in the case of those countries to put much more emphasis on the use of natural (physical) units of measurement than is done in the documents because of the lack of well organized markets in important parts of the developing economies and the significant role of subsistence production. Certain concepts and classifications which are set out in the documents are appropriate in the case of industrialized countries but are not applicable in the case of the developing countries. The organization of activities in, and the institutions of, developing countries are much less amenable to the highly articulated system of accounts of E/CN.3/394 than those of the developed countries; and the necessity to take account of marked changes in the transition proportions and input-output relationships in analysing and projecting the data of the education, health, etc. sequences is much greater. Nevertheless, it was thought that the basic matrices of E/CN.3/394 can be adapted to the circumstances of the developing countries.

(d) The requirements for additional socio-demographic data and approaches

21. The experts considered that certain types of socio-demographic data which are not dealt with in the matrices of E/CN.3/394 should be included-

in the system and that it may not be fruitful or feasible to fit these data into matrices. For purposes of delineating the characteristics or circumstances of various groups of the population, it is necessary to have tabulations on multiple cross-classifications of the data appearing in the margins of the sub-matrices and it may be cumbersome and not worthwhile to organize these tabulations in the form of matrices. This is also the case when multiple cross-classifications of data are required in investigating factors which account for the variance in flows, such as birth or death rates, retention or school drop-out rates or the results of given health measures, or in studying the correlations between various aspects of the attributes or circumstances of a given population. Matrices may also not be a suitable way of organizing data in respect of cumulative events or time budgets. It was suggested that a less articulated and more flexible framework than matrices would be required for purposes of co-ordinating and organizing the aforementioned data.

22. While the experts recognized that certain social indicators can be derived from matrices such as are set out in E/CN.3/394, they thought that matrices would not be a suitable means of integrating other social indicators into a system of demographic, manpower and social statistics. The social indicators in question are measures of social conditions and the extent to which social purposes or goals are being attained which do not necessarily concern sequences or which involve substantial cross-classification of data. Examples of these social indicators are measures of the extent of crime or illness, weighted according to severity, of the distribution of social services to the population, or the circumstances of disadvantaged groups of the population. The Group emphasized the importance of including these social indicators in the system.

(e) The economic accounts

23. The experts felt that, on the whole, the economic accounts of the social services set out in E/CN.3/394 yielded the kind of data in monetary units that is needed in the system on the cost-structure, fixed capital formation and financing of the social services. The experts were gratified to note that it is possible to detail the data of the national accounts and balances so as to compile valuable information on the unit costs of providing social services and the investment in facilities and the funds received and paid out for these purposes. Essentially the detailing of the relevant classifications of the national accounts furnish the basis for establishing the economic accounts of the social services. The economic accounts for the social services therefore form a bridge between the systems of socio-demographic accounts and the systems of national accounts and balances.

(f) Requirements for additional data on the social services

24. The Expert Group agreed that it was necessary to include data in the system on the real output of the social services measured in terms of the specific services rendered instead of in terms of inputs (costs). Measures in terms of inputs are not suitable for purposes of ascertaining trends in the provision of social services to the population or in the performance of the social agencies. In addition, data measured in natural (physical) units are needed in respect of the inputs of the social services and the resources employed in them, for example the number of teachers, doctors or nurses employed and the capacity of schools or hospitals.

25. The experts considered that in addition to social indicators and other measures of the outputs, inputs and available resources of the social services, data are required on the benefits accruing to the population from these social services and policies and on cost-benefit comparisons. These series of data are fundamental in evaluating the effectiveness and

efficiency of the social services and in choosing between alternative policies, ways and techniques of rendering the social services. The discussion of the experts concerning cost-benefit analysis are summarized later in this report.

2. A description of the structure of a system

26. A way of describing the structure of a system of matrices, accounts and balances that was suggested is illustrated and summarized below.

27. The illustration of the structure of a system is as follows:

	Units of measurement			
	Monetary units	Population units	Time units	Physical units
National accounts	SNA and MPS			
Regional accounts				
Sectoral accounts for: Education Health Public order and safety etc.				
Regional-sectoral accounts				

28. The rows in the table represent different levels in the aggregation of the data of a system; and the columns relate to the different units of measurement of these data. The sectoral accounts in respect of the social services are to be classified and delineated in accordance with the SNA classification of government social and community purposes. Certain common classifications are to be used in the case of the data for the social services.

29. The data in respect of the social services relate to the individuals and households receiving the services (structural data) and to the institutions and other bodies furnishing the services (performance data). The structural data consists of figures of stocks (attributes, circumstances, etc.) at given points of time and figures of flows (changes in and events in respect of attributes, circumstances, etc.) between these points of time. The data on stocks and flows in respect of the population are to be organized in the form of matrices. The performance statistics consist of input-output data in respect of the social services which are to be organized in the form of balances. In addition, tables are included on the results of the performance of the social services (social indicators) i.e., the changes in the status, circumstances, etc. of the population in relation to the output of the social services. The attention of the Group was called to the possibilities of delineating relationships between the various sets of data of such a system, which furnishes bases for model buildings, projections and other forms of research and, therefore, for planning and policy making.

3. Integration and linkages of sub-systems

30. The experts discussed the degree to which, and the way in which, the sub-system should be connected, one with the other.

31. The sub-system in respect of the sequence of learning, earning and the educationally and economically active should be integrated since the relevant classifications of each sub-system should interact with the relevant classifications of the other two. The socio-demographic and the corresponding economic accounts in respect of the social services should be coupled so that the two bodies of data may be used together for such purposes as evaluating the unit costs, unit resources and financing involved in rendering the services. The accounts on the distribution of income, consumption and wealth should be linked with the socio-demographic accounts in order to delineate the distribution over the population of the consumption of the relevant services and the correlations between the

levels of economic welfare and the other circumstances of the population. The manpower and production accounts should be coupled in order to take the demands for labour into account in analysing the data in respect of manpower.

32. The degree to which, and the way in which, the other sub-systems should be connected, one with the other, was not as evident. This is so because the extent to which the characteristic classifications of one sub-system should interact with those of another depends on the extent to which, and degree in which, the attributes and experience dealt with in each sub-system are in fact correlated; and, in general, it is necessary to carry out special studies in order to obtain such information. It was agreed that the definitions and classifications in respect of the various sub-systems should be consistent and that attention must be devoted to defining connexions between the sub-systems in respect of classifications as the work of developing the system proceeded. Care should be taken to avoid delineating a sub-system so that any interactions between its characteristic classifications and those of other sub-systems are barred.

33. It was suggested that a necessary condition of consistency between, and a valuable means of connecting up, the various socio-demographic sub-systems is to use a common set of classifications in respect of selected demographic characteristics of individuals and households. The data of the accounts in respect of the distribution of, income, consumption and wealth should also be classified in the same way. The demographic characteristics to which the classifications relate should be the probable important factors in the variance of the data of each of the sub-systems; and should distinguish groups of the population which are of particular interest when analysing social conditions and problems and formulating social policies. Classifying the data of all the sub-systems according to these demographic characteristics will yield co-ordinated information concerning all facets of the circumstances and experiences of each of the

groups of the population. This approach has some of the advantages of individualized data. It was noted that a set of common classifications of socio-demographic data is suggested in "Notes on basic data and classifications of a system of demographic, manpower and social statistics."

E. Selected problems of compiling the accounts and the definition of the boundaries and classifications of the sub-systems

34. The Expert Group discussed certain aspects of the general problems of setting up the system set out in chapter II of E/CN.3/394.

35. The experts indicated that, in general, it is easier and less burdensome to gather and cross-classify data on stocks than data on gross flows. Data on the characteristics or circumstances of the population at given points of time may be independently gathered and compiled in case of each point of time. On the other hand, while data on net flows during a period may be derived from the aggregated figures of stocks as of the beginning and end of the period, data on gross flows call for comparisons of information in respect of the same individuals as of these two points of time. Individualized data systems are the ideal source for this kind of information, but in the case of most countries it is not yet feasible to introduce such systems. Longitudinal surveys are also a potential source for this kind of information, but, not infrequently, it may be impracticable to carry out such surveys. In practice, it may often be necessary to obtain longitudinal information by including retrospective questions in household and other surveys. It will often not be feasible, however, to include such questions on a regular basis. It was, therefore, suggested that while data as to the current situation could be collected annually, it may be necessary to envisage longer intervals of time for the inclusion of retrospective questions, e.g., two to four years depending on the field. It was also thought to be more practicable, and more essential, to cross-classify data in more detail in the case of stocks than in the case of gross flows.

36. It was pointed out that in some fields there is a need for data at shorter intervals than annually and the question was raised whether in the proposed system the accounting period should necessarily be the same for all sub-systems. It was agreed that for analyses within particular sub-systems, identity of accounting periods was not required. However, in order to enable the relationships between the sub-systems to be studied, it is necessary that the data can be converted to common period of account.

37. The Group considered that in developing the system, further consideration should be given to the treatment of persons involved in more than one activity. In principle, though these may be practical difficulties, such multiple activities can be dealt with in two ways: by means of appropriate cross-classifications; or by using the amount of time spent in each activity as the unit of measurement. In this connexion, it was pointed out that for some purposes it is desirable to have data in terms of both individuals and time units.

38. The experts agreed that the boundaries of the different sub-systems should be determined so as to ensure that the various socio-demographic sub-systems do not overlap, that comparability is enforced between the economic and socio-demographic accounts which are to be used in combination and that the economic accounts are consistent with the national accounts. It was noted that the SNA classification of government purposes furnished a useful way of delineating these boundaries. The experts recognized that for certain analytical purposes, it may be necessary to combine selected data from different sub-systems.

39. The Group noted that the classifications listed in section B.3 of chapter II of E/CN.3/394 were intended to serve as an example of the classifications needed to describe the educational sub-system. Additional classifications are needed in order to explain the movements within the sub-system.

40. It was agreed that "year of birth" was more suitable as a classification variable in the matrices, than "age." The year of birth need not be adjusted in respect of the period dealt with and the chances of errors in the information are less.

41. The Expert Group stressed the necessity when to take account of the relevant concepts, definitions and classifications in existing international recommendations when developing a system. This furnishes the opportunity to study the recommendations in the light of the requirements for a coherent body of demographic, manpower and social statistics and the possibility to call attention to needed improvements in the co-ordination and content of the international recommendations. The Group noted with satisfaction that arrangements had been made for the co-operation of the interested specialized agencies of the United Nations in the work of developing the system.

F. The matrices and accounts of E/CN.3/394

1. Forms of presentation

42. In the discussion of chapter III of E/CN.3/394, the framework proposed for connecting stocks and flows was accepted as a convenient method of presentation. Although an accounting approach was useful, there was no need for an accounting presentation. The experts accepted the view expressed in the paper in favour of matrices based on opening and closing stocks as opposed to matrices based on year-to-year flows.

43. There was some discussion of types of table, distinguishing between cross-section (transversal) tables and vintage (longitudinal) tables. Both types of table have their place in the system.

2. The models based on the matrices

44. The system of analytical models which forms the subject of chapter IV of E/CN.3/394 was briefly discussed. It was pointed out that the models could be divided into open and closed; and that, in the former, new entrants are given exogenously whereas, in the latter, they are generated as endogenous variables within the model itself. For instance, in the simple population model with no migration, births and survivals are both calculated with the help of coefficients from the age composition sectors for males and females; whereas in the sub-system, new entrants are given and the models are essentially models for survivors in which changes of state as well as of age are recognized.

45. In addition to the distinction between open and closed models, several other distinctions are made: between forward and backward models and between quantity and cost models. The forward models are based on transition proportions; the backward models are based on the alternative assumption that admissions to any state are based on a fixed set of admission proportions. The quantity models relate to socio-demographic variables; the cost models to the corresponding unit costs; for instance those associated with the passage through various educational states.

46. It was explained that the models could be elaborated in various ways and, in particular, that provision could be made for changing coefficients and so for the calculation of a dynamic inverse. The need to do this is especially acute in the case of the developing countries. It was felt that there was not much to be said about the formal aspects of the models and that they could be more fruitfully discussed in the context of specific applications.

3. The all-age inverse

47. In order to clarify the possibilities of cross-section as opposed to longitudinal analysis and to illustrate the contribution that could be made by inverse matrices by providing details for compiling social indicators, Professor Stone presented an example of the model structure contained in E/CN.3/394. The example consisted of an analysis of the active sequence as a whole in terms of an all-age (or age-free) matrix for a particular year. This example was based on an extended version of table 13.1 of the paper. It related to a growing population and so the numbers in different cells of the flow matrix related to vintages of different sizes; for instance, those retiring from the labour force in 1965-66 came from vintages around 1900 when the size of a vintage was much smaller than at the present time.

48. A useful inverse matrix could be derived from this kind of information but only if the original matrix was corrected to one appropriate to a population in stationary equilibrium. In order to do this several steps were necessary. First, an assessment must be made of the age-distribution relevant to each entry in the original matrix. Professor Stone proposed to do this in terms of approximate age spans: an age-span of one or more years would be assigned to each element. The element would then be multiplied by the ratio of the numbers in a life-table population to the numbers in the actual population for that age-span. If the age distributions of the elements of the matrix had been accurately estimated, the adjusted flow matrix should have row totals equal in every case to the corresponding column totals. In practice, errors of assessment would ensure that this condition was not fully realized and a further adjustment procedure would therefore be needed, although its role would be a minor one. Professor Stone suggested the application of the RAS adjustment technique for this purpose.

49. Given a flow matrix appropriate to a stationary population, a coefficient matrix, C, could be calculated. From this the matrix inverse, (I - C), could be formed.

50. Such an inverse has the following properties:

(i) The elements are expressed in terms of time; with annual flows, in terms of years. The diagonal elements represent the average time spent in a state; the off-diagonal element in row j and column k represent the average time spent in state j multiplied by the probability that an individual in state k will at some time in his life be found in state j.

(ii) The sum of the elements in column k of the matrix measures the expectation of life of an individual entering state k. This expectation is divided into the average time spent in each state accessible, directly or indirectly, from state k. For instance, the expectation at birth in the enumerical example presented, the expectation at birth of entering a university in order to study for a first degree was 0.08. For a boy leaving a secondary school with two or more advanced level certificates in science, this probability was raised to 0.70; and for a boy leaving without even a single ordinary level certificate, the probability was reduced to negligible proportions.

(iii) The sum of the elements in a column measured the expectation of life on entry into the state to which the column related. It was possible therefore to determine from a life table the average age at which each state was entered.

(iv) The diagonal elements of the matrix, which measured the average time spent by an individual entering each of the states, could be measured by direct observation. This information on average times spent in different states could be used to check information on flows.

51. The experts generally agreed that this example demonstrated the value of cross-section data, even if it were not classified by age; and that inverse matrices furnish a powerful means of providing useful detail for the construction of certain kinds of social indicator.

52. It was recognized however that the given example was of a simple character and could not deal with the usual problems on which information was needed: for instance, medical care and health could hardly be studied without information on age. While the example was illustrative only, not based on actual data, the use of data in which age was the primary criterion of classification was fully exemplified in the case of education.

53. It was pointed out that times spent in different states were average times and that for many purposes the dispersions of these distributions were important. It was recognized that these dispersions could readily be calculated and that typically they were fairly large compared with the corresponding averages.

54. A number of experts raised the question of changing coefficients, referring to the fact that the example was based on fixed coefficients and to that extent represented a hypothetical state of affairs which, while useful in analysing the structure of a system at a particular date, would not be helpful in analysing a changing structure such as was commonly met with in practice, especially in the case of the developing countries. Professor Stone explained that the problem of changing coefficients was dealt with, in the context of education, in chapter X of E/CN.3/394; and, further, that if estimates were made of changes in coefficients it would be possible to construct a dynamic inverse on the lines laid out in section C.4 of chapter IV.

55. It was suggested that, even with a greater emphasis on the flow data, more detailed information is likely to be available on stocks than on flows and that the problem of disaggregating the stock information derived from transition models should be studied.

III. THE DEMOGRAPHIC DATA OF THE SYSTEM

56. The Expert Group considered that the demographic matrices and models discussed in chapters IV and V of E/CN.3/394 represent a significant step forward in unifying methods of projections in respect of population and other areas of social statistics. Introducing into the matrices the additional classifications in respect of the clear-cut factors discussed in chapters V and VI of the document should increase reliability of population projections. However, part of the variances in transition proportions may still be unaccounted for; and it is inconvenient to deal simultaneously with a significant number of classifications in the matrices. Furthermore, experience shows that birth rates and migration rates may change substantially from one time to another; and causal analysis of these shifts in rates is likely to be required in order to adjust the transition proportions. The experts therefore thought that it is necessary to supplement the regular information which can be conveniently included in the matrices with (i) multiple cross-classifications of data on stocks and flows and on their environment, which could be set out in subsidiary tabulations or sub-matrices, and (ii) data gathered in special inquiries on the strategic factors with which the transition proportions differ and change.

57. In the case of migration, external and internal, the experts agreed that, inter alia, changing government policies with respect to migration, both outward and inward, would make projections in this area very difficult even if the statistics of migration were much more complete than they are today. It was thought that, in the case of internal migration, efforts should be made to work out the consequences of present tendencies since population levels and changes formed the basis of much regional planning.

58. In view of the importance of migration and, in particular, of international migration, it was thought that there was a need to study the changing fertility and mortality patterns of migrants and the extent to which migrants gradually take on the pattern of some relevant group in the country to which they migrate. Studies should also be undertaken of other aspects of the socio-economic conditions of immigrants in the case of countries with large numbers of immigrants.

59. The experts noted that the Population Division of the United Nations has considerable interest in the work on a system of demographic, manpower and social statistics. The Population Division had also indicated that they find the progress made in E/CN.3/394 in conceptualizing the system impressive but consider that more attention should be devoted to including information in the system on the links and interplay between demographic, social and economic conditions and trends. In this connexion, the Population Division had called attention to the recommendations concerning programmes of demographic research made by expert groups which dealt with various aspects of this subject. The Division considered that the recommendation of the expert groups on programmes of research in respect of the demographic aspects of social development and economic development are of particular interest for purposes of defining the kinds of data which should be included in the system of demographic, manpower and social statistics; and offered to co-operate in developing the analytical aspects of the sub-system.

IV. SOCIAL MOBILITY

A. Scope of the sequences

60. The Expert Group noted that chapter VII of E/CN.3/394 is entirely devoted to intergenerational mobility. The experts considered that while intergenerational mobility is an important aspect of the subject, the analysis should also deal with intragenerational mobility. It was

recognized that in measuring intragenerational mobility it is necessary to distinguish between changes in occupational status or other indicators which point to changes in social class and changes in these indicators which are common in the course of a lifetime or which are temporary in character.

B. Summary measures of social mobility

61. Attention was drawn to other summary measures of the degree of social mobility, for example correlation ratios in respect of the status of fathers and sons. It was pointed out that table 7.2 of E/CN.3/394 provides a summary of the degree of intergenerational mobility although it does not provide a single measure.

V. LEARNING ACTIVITIES

A. Boundaries and classifications

62. The Expert Group's discussions of chapter VIII of E/CN.3/394 dealt with the scope and classifications of the socio-demographic and economic accounts in respect of education.

63. The Expert Group considered that priority should be given in the sub-system to defining the boundaries of education in terms of establishments and classification according to major purpose. The use of this unit of observation and classification will furnish a practical basis for (i) compiling the economic accounts and the required data in human stocks and flows in respect of education, (ii) distinguishing formal education, for which statistics are now available, from other forms of education, and (iii) applying the classification of the level of education and the major area of study which is being developed by UNESCO (ISCED). Furthermore, the economic accounts will then be consistent with the national accounts and balances. However, for such purposes as cost-benefit analysis of the various forms of vocational education training on the

job, as well as establishments devoted to vocational education, should be studied. It was noted that it would be difficult and burdensome to gather data on the cost-structure and recipients of education as an activity, irrespective of the context in which it is carried on and that work on the commodity-type classification which is required for this purpose has just recently begun.

64. It was noted that the distinction to be drawn between formal and informal education must necessarily be pragmatic, reflecting the possibilities of gathering statistics, and will therefore vary from one country to another. The Expert Group was also informed that UNESCO is extending ISCED to a third level of classification, in respect of subject of study.

B. The matrices and models in respect of learning activities

65. The experts agreed that the matrices and models presented in chapters IX and X are invaluable for purposes of organizing, presenting and projecting data on stocks in, and flows through, the educational system. It was considered to be important to take bottlenecks and other bars to meeting demands for education into account in the models for projecting transition proportions. It was noted that this could be done. The suggestion was made that data on applications for admission to key stages of education beyond compulsory school attendance age and on preferences in this respect, as compared to actual admissions, would be of assistance in taking the effects of inadequate facilities into account in making projections. It was noted that in order to deal with questions such as the relative desirable expansion of different levels and types of educational facilities, the models presented in the document need to be developed into programming models and additional information is required for this purpose.

C. The economic accounts

66. The Expert Group noted that the accounts presented in chapter XI of E/CN.3/394 on the cost-structure, gross fixed capital formation and finance of the educational services provided by government and private non-profit institutions are, on the whole, consistent with the accounts of the System of National Accounts (SNA). In order to meet the requirements for monetary data concerning the cost of educational services, it is necessary to detail the SNA classifications of purposes and transfers. The ISCED may be used to detail most of the purpose categories of the SNA in respect of education. Since the economic accounts and socio-demographic accounts in respect of education are linked, the economic accounts furnish a bridge between the system of social statistics and the system of national accounts.

67. The experts considered that in compiling data on unit costs in respect of various levels of education and areas of study by coupling the economic and socio-demographic accounts, it is necessary to take account of wastage due to drop-outsand repeaters, and noted that UNESCO had recently completed a pilot study of this subject. Other points made in respect of data on unit costs were as follows:

(i) Consideration should be given to the use of the academic year rather than the calendar year in the case of the economic accounts in respect of education.

(ii) Data on the unit costs of a given sequence of education may be compiled from cross-section or longitudinal data in respect of the sequence. In the latter case, it is necessary to adjust the data for different years to comparable prices.

(iii) Figures are wanted in respect of the unit costs of given professional or subject sequences, for example educating engineers, physicians, nurses or chemists. In order to gather such data, it is necessary to delve into whatever detailed cost-accounting records are available at educational institutions and to use a detailed, commodity-type classification of educational activities. Attention was called to the importance of avoiding excessive burdens to respondents in gathering such data.

VI. EARNING ACTIVITIES

68. The Expert Group discussed selected questions relating to the manpower sub-system, on the basis of chapter XII of E/CN.3/394. In connexion with this chapter the Group also considered the series and classifications relating to the economically active population set out in section III of table 1 of the "Notes on basic data and classifications of a system of demographic, manpower and social statistics".

69. It was agreed that the terminology used in E/CN.3/394 in respect of the field of manpower should be reviewed and should be brought fully in line with that adopted in the relevant international recommendations and that the international recommendations should be taken into account in formulating the sub-system. It was noted that a number of aspects of the required data on manpower were dealt with sketchily, or not at all, in the document, and it was agreed that the discussion should be considerably extended in the next version.

70. The Expert Group noted that several of these points were dealt with in the proposals concerning the series to be included set out in the "Note on basic data and classifications"; and expressed its general agreement with the list of series proposed in this document. The

attention of the Group was called to the effort which would be required in order to gather data on the proposed series and to the particular difficulties of compiling the tabulations listed under A2 and A3 on a current basis.

71. The Expert Group agreed that there was a need for an occupational classification according to broad categories (as well as the more detailed classification provided in the ISCO), but considered that the classification suggested in paragraph 12.26 of E/CN.3/394 was not fully adequate for this purpose. With a view to enabling the manpower sub-system to be connected with the educational sub-system, it is desirable that the broad occupational categories be formed by bringing together occupations requiring similar levels of education and degree of skills. It was recognized that the requirements will differ between countries. The number of categories to be recommended for international purposes should therefore be kept small, it being left to countries to develop the classification further according to their national requirements.

72. Attention was drawn to the importance of a cross-classification of the labour force by kind of economic activity and by occupation. In the absence of an individualized data system, such information is usually available in population censuses only. Because of the size of sample required, it is usually not feasible to produce these data from current surveys.

73. It was noted that there had not been sufficient time to delineate the production accounts of the systems of national accounts and balances with which the sub-system on manpower should be linked. The production accounts which are to be introduced would furnish the data required in respect of the demand for labour for purposes such as projecting the industrial and occupational distribution of the labour force.

VII. FAMILY GROUPINGS AND THE DISTRIBUTION ACCOUNTS

74. The Expert Group discussed the proposals concerning the sub-system for family groupings, which concerns the formation, characteristics and dissolution of families and households, and the links between this sub-system and the accounts for the distribution of income, consumption and wealth set out in chapters XIV and XV of E/CN.3/394.

A. The purposes and character of data and matrices of households

75. The Expert Group agreed that as in the case of the population sub-system, the sub-system on family groupings had a dual purpose: to provide data for demographic analysis as such; and to furnish information on demographic developments against which the developments in other fields covered by the system can be assessed, for example the sub-systems relating to housing, the distribution of income, consumption and wealth and delinquency.

76. Since the sub-systems on family groupings and on the population both deal with the demographic characteristics of the population, which underlie the other sub-systems, the Expert Group considered that it is desirable to conceive of them as playing essentially the same role in the system as a whole.

B. The definition and classification of households

77. The Expert Group considered the requirements and criteria for a classification of households and persons by socio-economic status. In discussing these questions the Group referred to the classification proposed in the "A draft complementary system of statistics of the distribution of income and wealth (E/CN.3/400) as amended in the report of the United Nations Expert Group on this subject (E/CN.3/415). The

Group was informed that this classification was a condensed and adapted version of the classification included in the European recommendations for the 1970 population censuses. (ST/CES/13) and as in the case of the latter, classification was based on the criteria of the main sources of livelihood, status (as employer, employee, etc.), kind of economic activity and occupation.

78. It was generally agreed that the socio-economic status of households and persons is affected by a variety of factors and that a classification in this field needs to be based on a combination of criteria. The following views were expressed in respect of the criteria to be used in developing the classification and the application of these criteria in the classification proposed in E/CN.3/400:

(i) Size of income, or size of consumption in the case of the developing countries, in terms of fractile groups, was proposed as one of the criteria for classifying households and persons by socio-economic status. However, it was generally agreed that income is not a satisfactory indicator of social class. Since the income class of many households or persons may change, the use of this criterion would result in a great number of shifts from one category to another and this would impair the usefulness of the classification for a number of purposes. Moreover, the use of this criterion would mean that the classification could only be applied in inquiries in which data on income are collected or obtained by matching data on income from other sources.

(ii) While it was agreed that occupation is one of the principal criteria to be applied in drawing up classification by socio-economic status, it was felt that in the classification proposed in E/CN.3/400, the occupational categories were combined into too broad and heterogenous groups. It was proposed that some of the categories of this classification should be further sub-divided with a view to distinguishing occupational groups involving different levels of education and degrees of skill.

(iii) It was suggested that the criteria of ancestry, education, occupation, employment status, income or consumption, and wealth could be used in delineating socio-economic categories and that the weight given to each could vary from one country to another, reflecting the prevailing social attitudes and institutions and stage of economic development of the country. This may also be the case in respect of various parts of the same country. Internationally, all that could be done is to describe the criteria, set out the indicators which might be used in respect of each, and illustrate how the criteria might be applied in the case of certain types of societies.

79. The Expert Group agreed that it was desirable to provide for a relatively simple classification by socio-economic status for use throughout the system. This classification could be further developed as required in the context of the individual sub-systems. The Group considered that this is a feasible objective in the case of the economically more advanced countries, but that multiple classifications may be desirable in the case of the developing countries.

80. The Expert Group agreed that the classification set out in E/CN.3/400, as amended in E/CN.3/415 constituted a suitable basis for developing the classification to be included in the system. Some of the categories of the classification would, however, need to be further sub-divided with a view to obtaining groups which are more homogeneous from the point of view of level of education or degree of skill involved in particular occupations.

C. The structure of the distribution accounts

81. The Expert Group agreed that, just as the social service accounts of the system are linked to the national accounts, the accounts for the distribution of income, consumption and wealth should be linked to the national accounts and balances.

82. The Group noted that the draft system set out in E/CN.3/400, as amended in E/CN.3/415, is linked with the SNA and MPS and involved, in most instances, the further detailing of relevant flows of the systems. In a few instances, however, it had been thought necessary for the purpose of statistics on income distribution, to introduce concepts which differ from those shown in the national accounts and which can be derived from the national accounts by regrouping relevant flows. The main parts on which the proposed complementary system differs from SNA are:

(i) The SNA concept of disposable income has been replaced by that of available income. Available income differs from disposable income in that it includes benefits less net contributions in respect of pension funds and annuities issued by life insurance companies.

(ii) While, in principle, the complementary system includes data in respect of compensation of employees, it is recognized that for practical reasons the collection of data may need to be limited to wage and salaries.

Unlike the SNA, the complementary system also includes the concept of total consumption of the population. The components of this concept can, however, be derived from SNA.

83. The Expert Group considered that, in principle, the complementary system should be as full consistent with SNA and MPS as is possible. It was recognized, however, that because of the special requirements in respect of statistics on the distribution of income, consumption and wealth, it may be necessary to admit certain deviations from SNA and MPS concepts, such as those described in the previous paragraph.

84. It was recognized that the term "distribution accounts" may lead to confusion, and should be replaced by "accounts on the distribution of income, consumption and wealth."

85. The Expert Group considered that, in particular, in the case of developing countries household consumption expenditure and consumption of households in physical terms, may be a better measure of differences in levels of welfare than income. The Group noted that in the complementary system, as much attention is given to consumption as to income, though the level of consumption is not used as a variable for classifying households.

D. Approaches to measuring benefits

86. The Group noted that the short treatment of this subject was concentrated in this part of E/CN.3/394. It was agreed that this important subject should receive much fuller treatment in a future version of the document. Two aspects of the problem that should be distinguished were emphasized: first, the measurement of benefits and, second, the allocation of benefits among different groups of the population. Benefits from such services as health or education may be valued differently by different groups, and these differences may not be correlated with differences in costs.

VIII. HEALTH AND MEDICAL CARE

A. Classifications

87. Attention was drawn to the need for certain characteristic classifications in addition to those proposed in chapter XVI of E/CN.3/394. It was also pointed out that classifications according to socio-economic status, level of education, level of income, occupation, housing conditions and nutritional level are important for analysing the health conditions of different groups of the population.

B. Matrices in respect of states of health

88. It was pointed out that the matrix approach described in chapter XVI of E/CN.3/394 is unfamiliar to health statisticians and that this gives rise to a problem of communication. The Expert Group agreed that it is essential to explain in a way that can be more easily understood by health statisticians how the various types of health statistics are accommodated in the matrix approach to organizing the data of the sub-system.

89. First, matrices relating to states of health provide a basis for coupling data on predisposing conditions, ailments at different stages of life and treatments. The inversion of these matrices provides valuable information on mean life expectancies classified according to states of health. Since these matrices are triangular, much longer matrices can be inverted than would otherwise be the case.

90. Second, the demographic and economic accounts of health can be linked in order to compile data on the unit costs of various kinds of medical care and the accessibility of, the degree to which, and the ways in which, medical and other health care facilities are used. The data on health manpower from the manpower sub-system can be coupled with these accounts in order to interrelate the supply of, and the demands on, medical and other health-care personnel.

91. Third, the data of the health and other relevant sub-systems can be related in order to delineate the interactions between states of health and demographic changes, levels of income and nutrition, housing conditions and education.

92. Attention was drawn to the problems involved in ascertaining the state of health of individuals at different stages of life. There is no record of many illnesses and injuries because the persons affected do not consult a doctor or take other steps to obtain medical care. Moreover, as people proceed from one stage to another, it is necessary to have information on their state of health not only at the beginning of that stage but also at the beginning of each of the earlier stages. The Expert Group agreed that this problem requires further study. It was noted that there is growing interest in the longitudinal approach and in record linkage with the aim of bringing together different records relating to the illnesses and medical treatments an individual has had.

C. The economic accounts of health

93. The Expert Group was informed that WHO has worked to some extent on developing economic accounts of the health services using the SNA as a guide. The major obstacle encountered in this work is the lack of basic data and the incomparabilities in the available data in the case of a number of countries. It was thought that the development of economic accounts as part of the system of demographic, manpower and social statistics will be of considerable assistance in fostering the national compilation of useful economic data in respect of the health services.

94. The Group noted that the SNA was followed as closely as was possible in compiling the illustrative health accounts of the public authorities in chapter XVII of E/CN.3/394 and that these accounts depart from the SNA on certain points of detail only. It is necessary to detail the classifications in respect of purposes and kind of activity in order to present the required data in the accounts. The experts considered that it would be advantageous, and should be feasible, to follow the national accounts closely in delineating the economic accounts in respect of health.

95. The Expert Group stressed the requirements for quantity and price information on the outputs and inputs of health services and for constant-price series on the gross fixed capital formation of these services. These data are needed for such purposes as projecting the requirements for health manpower and facilities, measuring the performance of the health services and understanding the sharply rising costs of health services in some countries.

96. The Group's attention was called to the possibilities of compiling aggregated indexes of the output of health services when detailed cost accounting records are available. While recognizing the deficiencies of weighting indicators of health-care activities according to costs, especially when comparing the efficiency of alternative modes of treatment of illnesses, it was considered that, in general, it would be necessary to use this approach, making adjustments, where possible, for differences in the results (quality) of the various facets of treatment. The provision of information, even of a partial character, on the results of alternative modes of treatment would be an important step toward the more viable approach of cost-benefit analysis.

97. The approach to measuring the output of health services outlined above is not useful for such purposes as making comparisons of efficiency between,and allocating resources among, such courses of action as

preventive health care, early detection of health problems, health education and various modes of treatment. It is then necessary to do cost-benefit analysis, but the possibilities of applying the cost-benefit approach to such broad questions are limited by lack of comprehensive information on the results of alternative courses of action and, more seriously, by the inability to arrive at agreed values to the results. It was suggested that it would be useful to value the results in a negative fashion by use of such measures as the number of days of illness associated with each course of action, coupled perhaps with the appropriate wage and salary rates.

IX. DELINQUENCY

A. Scope of the sub-system

98. The Expert Group agreed that this sub-system should, in principle, cover all aspects of public order and safety. The view was expressed that social delinquency, e.g., not violence, should be included in the system. It might be desirable to sub-divide the sub-system into several parts, for example, criminal offences, offenders and victims, civil offences, fire protection, maintenance of road safety, etc. However, serious difficulties would be encountered in separating the activities of the police relating to the prevention and control of crime from the activities relating to traffic control and in distinguishing the activities of law courts relating to criminal offences from the activities relating to civil offences.

99. The experts considered that the sub-system should include statistics concerning the victims of crime. These statistics should cover, inter alia, the number of deaths, injuries of various types and victims of sexual offences, the value of the losses of property resulting from thefts, embezzlement, etc., and the value of damage to property resulting from accidents and vandalism.

B. Indicators and classifications

100. The Expert Group noted that it is important to develop early-warning indicators of delinquency. It was pointed out that the probability that an individual will commit a crime is significantly greater in the case of persons who have already been delinquent than in the case of other persons. It was pointed out that in classifying offenders, it is important to distinguish between first offenders, second offenders, third offenders, etc.

C. Summary measures of criminality

101. Attention was drawn to the usefulness of compiling summary measures of the level of crime. It was suggested that an index could be compiled as a weighted average of indexes of different crimes by using weights which are proportional to the degree of gravity of the various crimes, as measured in opinion surveys.

D. Methods of organizing data for analysis

102. The view was expressed that in the case of crime as in other areas, matrices are effective means of organizing data into sequences as for such purposes as projection, but additional approaches are required for purposes of other studies. Attention was drawn in this connexion to the need for finding ways of compressing data on the criminal history of persons because it is not feasible to use these data in full detail in analytical studies.

X. ADDITIONAL FIELDS

103. The Expert Group considered the requirements in respect of certain sub-systems which are not dealt with in E/CN.3/394. Proposals concerning the series and classifications to be included in these sub-systems were set out in the "Notes on basic data and classifications."

A. Welfare services

104. The Group discussed problems of the boundaries of the proposed sub-system for welfare services. It was pointed out that some aspects of welfare were closely related with the fields covered in other sub-systems, notably those for health and delinquency; and the question was raised whether it would not be better to deal with these aspects in the context of the sub-systems in question instead of setting up a separate sub-system for welfare. The Group noted that certain facets of welfare care, for example, non-monetary aspects of income maintenance, could not be accommodated in other sub-systems. It was therefore agreed that it is preferable to provide for a separate sub-system, the boundaries of which should be defined in accordance with the definition of welfare services in the purpose classifications of the SNA.

105. It was pointed out that welfare services covered a relatively wide range of disparate services and the question was raised as to which aspects of welfare would be suitable for analysis in terms of life sequences similar to that suggested in respect of other sub-systems. The suggestion was made that it may be of interest to study the life chances of children brought up in welfare institutions.

106. Attention was drawn to the value of accounts relating to the expenditure on social welfare. The Expert Group noted that summary information of this character was provided for in the SNA and that this information can be spelt out in greater detail without difficulties.

B. Housing

107. The Expert Group noted the proposals concerning the series and classifications to be included in a sub-system on housing set out in section IX of table 1 of the "Notes on basic data and classifications." While it was generally agreed that there was a need for comprehensive data on the size and conditions of the housing stock and on the state, and changes in it, of housing of the population, views differed as to whether a sub-system should be set up in respect of these data.

108. It was pointed out that housing had economic as well as social aspects. The economic aspects of housing are to a certain extent taken care of in the present SNA and in the balance sheet accounts of the system which are being developed. Certain data on the social aspects of housing are provided for, or can be accommodated in, the accounts on the distribution of income, consumption and wealth. The experts holding this view considered that the additional information which is needed on the housing situation and housing conditions, including data, in physical terms, could be accommodated by detailing and supplementing the accounts in the systems of national accounts and balances and that it therefore is unnecessary to include a sub-system on housing in the system of demographic, manpower and social statistics.

109. In the view of other members of the Group, it is desirable to make provision for a separate sub-system on housing. They noted that housing, which is a separate purpose category in the SNA classification, could not be adequately dealt with in the context of social statistics if a sub-system in respect of it is not provided. Facilities for housing are an important aspect of social care and housing conditions are the subject of government concern and policies. It was recognized that this sub-system might differ in certain respects from the sub-systems for health, education, etc., but the experts holding this view considered that this should not prevent the treatment of housing as a separate sub-system.

110. The view was expressed that a number of the series set out in table 1 of the "Notes on basic data and classifications" and classifications in respect of housing are not suitable for use in developing countries. It was pointed out that concepts such as rooms per person, and classifications according to various types of facilities were comparatively meaningless in at least the rural areas of these countries where a relatively small proportion of the population live in conventional dwellings and where the

facilities in question are to a large extent non-existent. It was also felt that under the conditions of these countries, a definition of living space in terms of the space occupied by a household was more appropriate than a definition in terms of rooms.

111. The following suggestions were made for the inclusion of further series in the list:

(i) Data on changes in the dwelling stocks other than those resulting from new construction and demolitions, i.e., alterations, renovations and additions to space.

(ii) Data on secondary dwellings.

(iii) Data on the year of construction of dwellings.

C. Cultural activities and recreation

112. The Expert Group noted that in the "Notes on basic data and classifications" proposals were also made in respect of the series and classifications to be included in a sub-system for culture and recreation. The Expert Group did not discuss these proposals.

XI. SPECIAL NEEDS OF DEVELOPING COUNTRIES

1. Required modifications and adaptations

113. The Group noted that, although the highly articulated system and sub-systems considered in the present report were more readily applicable in the highly industrialized countries, the conceptual framework set out in E/CN.3/394 is amenable, in principle, to adaptation for use in developing countries, by introducing more appropriate concepts, definitions, classifications, etc., and by using changing coefficients in the matrix of stocks and flows. Needs and possibilities of such modifications have been indicated at certain places in the report. Also, with the progress of industrialization, conditions in developing countries would become more similar to the industrialized countries, and the system would become increasingly useful for such countries.

114. The Expert Group recognized that simplifications and adaptations for developing countries would require a good deal of detailed studies, and would vary widely for countries at different stages of development. In the limited time at the disposal of the Group it had not been however possible to give adequate attention to the special requirements of the developing countries.

115. The Group recognized that social statistics, in a comprehensive sense, has in certain respects a higher priority than some of the purely economic statistics in developing countries because social changes and social mobility are essential pre-requisites for economic development, and because progress of industrialization would depend to a large extent on the direction and speed of structural changes in socio-economic conditions of the developing societies. The view was expressed that there was an urgent need to take suitable action to provide guidelines and priorities for necessary modifications and adaptations in the system for the use of developing countries.

116. It was pointed out that the use of concepts and definitions suitable for advanced countries may lead to confusion and become formidable obstacles to real progress in developing countries. Mention was made, for purposes of illustration, of the concept "unemployment." In the developing countries, household enterprises form an overwhelmingly large part of economic activities; in some countries 70 or 80 per cent of the labour may be engaged in household enterprises, in which no one can become technically "unemployed" in the sense of the advanced countries because some productive activities would continue, although the volume of gainful work may be so meagre that the households may have to live on the verge of starvation.

117. In the developing countries there is a great deal of subsistence production by households, and a large share of the household consumption comes out of this production. A large portion of the transactions take place in highly localized markets within a single village or a group of villages; and organized markets do not exist for important sectors of the economy. In this situation it is particularly difficult to collect information in terms of money values especially in respect of income; the use of natural or physical units will often be indispensable in the case of the developing countries.

118. It is known that disparities in levels of living are far greater in developing countries than in the advanced countries. Information on levels of living and disparities in physical terms is of fundamental importance in developing countries because reduction of such disparities and inequalities is necessary not only from the point of view of social welfare but may also be an essential condition for economic development.

2. Household and related inquiries

119. It was noted that integrated household surveys (and also surveys of appropriate institutions and establishments of various kinds), annually or at suitable intervals, are a most useful method for the collection and analysis of distributional aspects of consumption and of social and economic conditions in developing countries. It was pointed out that in household surveys, it is also possible to collect man ad hoc basis information on a wide range of items, such as births and deaths; number of persons who have received, or are receiving, education and training classified according to broad categories; conditions of [illegible] health in a simplified form, for example, in terms of number of days on which a person was unable to perform his normal economic activities in a given reference period (week, month, etc.) and number of occasions

on which a person received the services of medical personnel or could visit a clinic; occupation and activities classified according to broad categories of levels of training and skills; conditions of housing and availability of water, latrines, electricity; sports, recreation and cultural activities; religion, etc. On the basis of surveys of villages, or of urban blocks, it is possible to collect information on items such as the distance from the nearest markets, post offices, railway stations, highway transport, educational and medical care institutions at various levels, libraries, cinemas, etc., and also on certain aspects of environmental conditions.

120. The Group noted that continuing attention is being given by the Statistical Office of the United Nations and the specialized agencies to the development of survey techniques to suit the needs of the developing countries. The Group considered it important that the supply of information in an integrated form on various aspects of economic and social conditions through household and related surveys would make it possible to study interrelations between different social and economic factors, and also to superpose and link some of the different classifications and sub-systems discussed in this report. It was also pointed out that the use of parallel or inter-penetrating networks of samples in the survey design would provide built-in cross-checks of validity and possibilities of estimating the margin of uncertainty in the data.

121. For reasons indicated above, the Expert Group felt that it should be possible to draw up, on the basis of survey data, an integrated simplified system of demographic, manpower and social statistics which would be suitable for use by the developing countries. The Group recognized the importance of this idea and the need to take it fully into account in the future work on a system. The experts also observed that, gradually, with the increasing use of censuses and other sources of information, it would be feasible to amplify the simplified system to suit needs at higher stages of economic and social development.

XII. PROGRAMME OF WORK

122. As background for the discussion of a world programme of work in respect of a system of demographic, manpower and social statistics, the Expert Group were informed of the planned or proposed meetings during 1971-1972 in the various regions of the world on this subject and areas of statistics included in, or closely related to, the system and the work contemplated at the world level in respect of the latter fields.

123. The meetings planned or contemplated in the case of the regions of the world other than Europe are as follows:

(i) Africa: A seminar on current demographic statistics in 1971 and perhaps a working group on a system of demographic, manpower and social statistics in 1972.

(ii) Asia: A seminar on social statistics in 1971.

The Group was informed that ILO is considering the holding of meetings on manpower statistics in Asia during 1972 and in other regions in later years.

124. The meetings planned and contemplated by the Conference of European Statisticians are as follows:

1970/71

(i) Working Party on a System of Demographic and Social Statistics which will discuss concepts, definitions and classifications of the system and social indicators.

(ii) Meeting on population projections. The topics to be discussed are possibilities of improving population projections made by ECE countries and promoting their comparability and (if possible) possibilities of improving the comparability of labour force and other demographic projections.

(iii) Meeting on health statistics jointly with WHO, which will consider the position of health statistics in the frameworks of the systems of national accounts and balances and the system of demographic and social statistics.

(iv) Group of Experts on Housing, Building and Planning Statistics, which will deal with statistical requirements for urban renewal and planning.

(v) Meeting on statistics and indexes of prices and quanta, which will discuss a general system of statistics of prices and quanta and problems relating to price and quanta indexes in several fields of activity.

(vi) Meeting on activity and commodity classifications, which will consider a draft classification of commodities by industrial origin.

1971/72 (provisional)

(i) Working Party on a System of Demographic and Social Statistics, which will consider concepts, definitions and classifications of the system and social indicators.

(ii) Working Party on National Accounts and Balances, which will deal with statistics of the distribution of income, consumption and wealth and balance sheets.

(iii) Meeting on statistics of education jointly with UNESCO and ILO, which will discuss the educational sub-system in the system of demographic and social statistics and statistics on vocational training.

(iv) Seminar on demographic statistics, which will discuss the demographic sub-system in the system of demographic and social statistics and sources and methods of collection and evaluation of demographic data between population censuses.

(v) Meeting on statistical requirements for studies on environmental problems.

(vi) Meeting on activity and commodity classifications.

1972/73 (provisional)

(i) Working Party on a System of Demographic and Social Statistics, which will deal with the system as a whole.

(ii) Meeting on health statistics jointly with WHO.

1973/74 (provisional)

(i) Working Party on a System of Demographic and Social Statistics.

125. The areas of statistics which are part of, or closely related to, the system of demographic, manpower and social statistics on which work is planned or contemplated at a world level during 1970-1972 are as follows:

(i) The sixteenth session of the Statistical Commission, October 1970, will consider draft revised international recommendations in respect of vital statistics (E/CN.3/411). It is hoped that the Commission will be in a position to adopt revised recommendations.

(ii) Work on developing guidelines in respect of international and internal migration will be carried on during 1971-1972.

(iii) The sixteenth session of the Statistical Commission will discuss a draft complementary system of statistics on the distribution of income, consumption and wealth (E/CN.3/400); these guidelines will be revised in the light of the Commission's conclusions and be the subject of a round of consultations with national statistical offices and interested international agencies during 1971; a second session of the Expert Group on the subject will be held; and it is hoped that the seventeenth session of the Statistical Commission, which will meet in 1972, will be in a position to adopt a final version of the complementary system.

(iv) The sixteenth session of the Commission will consider a draft system of statistics of prices and quanta (E/CN.3/401) which is linked to the systems of national accounts and balances; this system will be revised in the light of the Commission's comments; the revised version will be the subject of a round of consultations with national statistical offices and interested international agencies during 1971-1972; and a draft of the system will be submitted to the seventeenth session of the Commission which it is hoped can serve as the basis of the adoption by the Commission of guidelines in respect of these statistics.

(v) The sixteenth session of the Statistical Commission will discuss draft definitions, classifications and standard accounts and tables in respect of the balance sheet and evaluation accounts of the SNA (E/CN.3/398); these guidelines will be revised in the light of the comments of the Commission and be the subject of a round of consultations with national statistical offices, interested international agencies and perhaps an expert group during 1971-1972, and the seventeenth session of the Commission will deal with this subject.

(vi) A commodity classification of all goods and services being developed; draft versions of classification will be the subject of rounds of consultations with national statistical offices and interested agencies and will be discussed by the seventeenth session of the Commission.

126. The Expert Group was also informed that the sixteenth session of the Statistical Commission will consider E/CN.3/394 in conjunction with the Group's report and will indicate the work on the system of demographic, manpower and social statistics which should be carried forward and the directions which this work should take. It is evident that developing the system will take a considerable number of years.

127. In the light of its discussions and the information outlined above, the Expert Group recommended the following programme of work in respect of the system of demographic, manpower and social statistics during the period 1971-1972:

(i) Preparation of a paper on the series, including social indicators, and the concepts and classifications of a system of demographic, manpower and social statistics by early 1971. The paper should also deal with the system in which these series and classifications are organized and the relationship of the series to the system set out in E/CN.3/394. The Group understands that this paper will be considered by the 1970/71 meeting of the Working Party on a System of Demographic and Social Statistics of the Conference of European Statisticians and believes that it will be useful if that session of the Working Party had background papers on various views in respect of the aims, scope and character of a system of demographic, manpower and social statistics. The Group considers that the paper under discussion should be the subject of consultations with national statistical offices with a view towards gathering comments and information on the series which the offices already compile, would wish to add, and the possibilities and priorities of gathering the new data.

(ii) Preparation of a revised and extended version of E/CN.3/394 by late 1971 or early 1972. The Group thought it would be useful if the 1971/72 Working Party on a System of Demographic and Social statistics would consider the new document and if it were circulated to national statistical offices for comment.

(iii) Convening the second session of the Group in early 1972 in order to consider the revised and extended version of E/CN.3/394 in the light of the comments of regional working groups and national statistical offices on the system and its series, concepts and classifications and the developments in the work on sub-systems and related areas of statistics. It will be useful to invite members of the Expert Group to present papers to the Group, if they so wish, on their view in respect of the aims, scope and character of the system.

128. The experts indicated that it is essential to carry on work on the system as a whole and its constituent parts, hand in hand. They considered that a key role of the Group in the development of the system is to assist in, and give advice in respect of, the co-ordination of the diverse projects involved in this work. In this connexion, the Group must be concerned with the system as a whole, the ways in which the sub-systems are co-ordinated and integrated in the common framework and the interplay between the system as a whole and its parts. In order to carry out this work, the members of the Expert Group should be kept informed of developments in respect of areas of statistics which are part of, or closely related to, the system of demographic, manpower and social statistics.

129. The Expert Group considered that, as resources and time permit, work in respect of the topics outlined below should be undertaken:

(i) Study, in some detail, of the concepts and techniques of data required for, and applications of, cost-benefit analysis; and consideration of programming models.

(ii) The kind of basic data required for the system, the problems of, and approaches to, and methods of gathering, storing and using these data for purposes of the system.