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INTERNATIONAL MIGRATION STATISTICS

Organization and Operation

Recommended Standards

Sampling

FOREWORD

when stated

In April 1953, the Economic and Social Council endorsed a series of Recommendations for the Improvement of International Migration Statistics, which had been developed by the Statistical Commission and the Population Commission after detailed consultations between the Secretariat and governmental statistical services. It may be anticipated that these recommendations will be useful in improving the quality of migration statistics in many countries and in attaining greater international comparability. It is recognized that in several parts of the world these data leave much to be desired. At the same time, interest in their improvement has recently revived as a consequence of the increase in migration since the end of the Second World War and of the public attention now given to various aspects of migration in many countries.

The present publication begins with an exposition of the major problems of organization and operation relating to the collection and processing of migration statistics, with special emphasis on coordination among the various national departments which are generally concerned with some phase of these operations. A second chapter presents the text of the Economic and Social Council resolution No. 469-E (XV) relating to these statistics, and of the Recommendations for the Improvement of International Migration Statistics. The last chapter contains information on the use of sampling for the collection or tabulation of migration data, and gives the text of the operative parts of the observations of the Sub-Commission on Statistical Sampling concerning the methods for experimenting with sampling in this field.

A detailed survey of the migration statistics published by sixty-nine countries or territories, including a description of the methods of collection used and of the tabulations provided, can be found in "Problems of Migration Statistics" (Sales No. 1950. XIII. 1), published in 1949 by the United Nations.

It is hoped that the present publication will prove useful to the statistical departments of countries interested in the implementation of the recommendations for the improvement of migration statistics and also to the organizers of services and training centers where this class of statistics will be considered.

The continuing co-operation extended to the Secretariat by the International Labour Office in the preparation of several documents assembled here is gratefully acknowledged, together with the collaboration of the Population Division in the Department of Social Affairs of the United Nations.

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1. Definition and Scope of Migration Statistics

In 1932, the International Conference on Migration Statistics took the view that statistics of international migration should include every removal from one country to another, with the exception of tourist traffic. In the 1949 provisional recommendations on migration statistics, and in the 1953 Recommendations for the Improvement of International Migration\ Statistics, the Population Commission and the Statistical Commission of the United Nations followed the same path and recommended that statistics be obtained on all arrivals and, if possible, all departures of international travellers (with the exception of frontier traffic), classified in such a way as to show which are migrants. Adopting these definitions in the present paper, we find that the field of international migration statistics (or, for short, migration statistics)[2] comprises permanent immigration and emigration as the more important items and, in most countries on a second level of importance, temporary immigration and emigration, including seasonal movements. Information on frontier traffic will often be needed to supplement migration data proper, as recognized in the 1953 recommendations. Frontier traffic is the movement of persons residing in the frontier area, moving frequently across the border and often authorized to use simplified travel documents (frontier cards). Whether emigration or immigration, or both, will be covered in the statistics of a country will often depend on whether one or both are important for that country.

In any case, the statistics will, or should, throw light not only on the number of persons making up the streams of emigration and immigration during a year, or other convenient period of time, but also on their demographic, social and economic characteristics such as: sex, age, country of last permanent residence or of intended permanent residence, citizenship, occupation, industrial classification of economic activity.

As it has been pointed out long ago by the International Labour Office, the international migrant is a species of the genus international traveller. For this reason, it is often found expedient and even desirable to place at least the total numbers of migrants in the context of statistics of international travellers. The 1953 recommendations describe means to achieve this result and contain a nomenclature of major categories of arrivals and departures, which is gradually coming into use in an increasing number of countries. Since 1949, the Demographic Yearbook of the United Nations presents all available national statistics on the following major categories of arrivals from abroad, which are also those of the 1953 nomenclature:

Total arrivals

Permanent immigrants

Temporary immigrants

Visitors (transit; holiday; education; business; etc.)

Residents returning from temporary sojourns abroad.

Whenever possible, separate figures for refugees or displaced persons, included in the major categories, are brought out.

Corresponding major categories are used for departures to other countries.

While from the point of view of statistical procedures and, as it were, accounting, migration statistics find in general so conveniently a place in the framework of travel statistics, from the functional point of view they also belong to the fields of demographic statistics and of labour statistics.

The relationship between migration and demographic statistics derives from the simple fact that the net balance of migration is one of the two components of the total increase or decrease of a population during a period of time, the other component being the natural increase or net balance of births and deaths. Thus, data on international migration form a part of the field of demographic statistics of which the others are census statistics and vital statistics. It may be stated more precisely that the net balance of permanent migration is a component of the total variation in the 'de jure' population during a period of time, while the net balance of arrivals and departures is a component of the total variation in the 'de facto' population.

Likewise, there are close links between migration statistics and labour statistics. A large proportion of migrants are economically active persons; often they

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[1]This chapter is based on the text of a paper (No.20.1) presented to the International Seminar on Statistical Organization held at Ottawa in October 1952 under the sponsorship of the Government of Canada and the United Nations, and on the round-table discussion that followed the presentation. Cf. "Reports and Proceedings of the United Nations Seminar on Statistical Organization", Statistical Papers, Series M. No. 16, United Nations, 1953.

[2]Internal migration is also of great importance in many countries, located as far apart as the East of Asia, the Americas or Europe, since it is a close correlate of economic progress, particularly in countries undergoing transition from an agrarian to an industrial and commercial economy with its social and political consequences. The Economic and Social Council called attention to internal migration in a resolution of 14 April 1953 (No. 471-D(XV)), wherein it also invited Member States to take measures for improving the statistical and demographic information in this field, recommended that the Secretary-General aid those countries requesting technical assistance on these problems, and directed to them the attention of the regional economic commissions. The measurement of internal migration raises problems which are basically different from those of international migration statistics, since no control is usually exercized over the movements of people within a country. In a few countries, however, persons moving from one city or municipality to another are required to notify the authorities of one or both places, so that entries may be made in the "population registers". Statistics of internal and external migration can be derived from these registers. Other methods of estimating internal migration include census questions on place of birth and on place of residence at a previous date, questions in labour force surveys enabling to measure seasonal migration of workers, labour force registration.

migrate because they are attracted by employment opportunities; as members or potential members of the labour force, with special characteristics, they are the concern of public administrators, economists and sociologists.

2. National and International Needs for Migration Statistics

Migration statistics measure the immigration and emigration that take place during a given period of time; they are needed to appraise the size of the problems involved in these movements, and to design the policies intended to meet them. For example, a knowledge of the number of immigrants entering a country is required together with census data and vital statistics in order to make a complete analysis of the changes observed in the course of time in the size and structure of the population of that country. Information on the numbers of immigrants in the various occupations or industries is necessary to appreciate the influence of foreign manpower on the labour market from the point of view of the employers, and of the employees and trade unions. Data on the sex, age, citizenship, mother tongue, of the immigrants greatly facilitate an understanding of the nature and size of social and cultural assimilation problems existing at a given time and place. Some of these statistics are needed also to estimate the cost of social security benefits for alien workers and their dependents.

In brief, the consideration of any and all of the complex problems associated with international migration calls for some form of migration statistics, be it total figures of immigration or emigration or more detailed statistics presenting the numbers of migrants classified according to certain of their characteristics. The needs for particular tabulations of migration statistics are very varied, as it may be surmised from the examples given above. In fact, the tabulations published by the various countries present a large diversity. This subject is covered in detail in 'Problems of Migration Statistics', published by the United Nations in 1949; no attempt is made here to go beyond a broad description of the tabulations more commonly found for migration statistics. These fall into three main categories:

- -demographic characteristics, including sex, age, marital status, family composition;
- -social characteristics, including country of last (or intended) permanent residence, country of birth, citizenship (i.e. legal nationality), ethnic origin or race, religion, mother tongue, education, class travelled on ship, or mode of transportation;
- -economic characteristics, including occupation, skill, industry (i.e. branch of economic activity), status (as employer, employee, worker on own account, and unpaid family worker), capital available, financial assistance for migration received from governmental or private sources, contractual assurance of employment in the country of destination.

In addition many multiple classifications, based on a combination of more than one characteristic, are required for some purposes and are tabulated and published in several countries.

From the point of view of the needs that they should meet, migration statistics present some exceptional characteristics. While most other demographic and social phenomena take place within a national framework, the migration movements considered here are by nature international. As a consequence, the needs for migration statistics that can be described properly as international are of a more dominant importance in relation to strictly national needs than is the case with most other types of statistics. The first need for migration statistics, which is for measuring with accuracy the size of emigration and immigration, can serve well to illustrate this point. While this primary need arises in the countries of immigration and in the countries of emigration and can be considered as a national one, the international aspect must be brought to bear at once in order to obtain a full and true understanding of the actual need to be met. Migration movements are so closely related one to another that it is desirable for a given country to be informed not only of the volume, direction and composition of the immigration and emigration affecting that country, but also of the movements affecting other emigration and immigration countries. Furthermore it is generally difficult to record accurately the departures of international travellers including those of permanent emigrants. Consequently, emigration countries, particularly those having land borders, may be able to ascertain the destinations of their people with greater accuracy from the statistics of the countries of destination than from their own data. These countries will also need foreign migration statistics to complete the picture given by the national ones, or to compare both series of data relating to the same movement and find out where improvements are desirable.

Another international need for migration statistics arises in connexion with any attempt to build up an overall picture of international migrations in the world during a given period of time. In this process, each movement can be measured on the basis of the statistics collected by each of the two countries involved, that of emigration and that of immigration. If these two sets of data are available, they have to be compared and, in so far as feasible, reconciled. If historical series are used, a world picture of migration can show not only the principal movements during a certain period, but also the major trends over time. Indications may in this manner be obtained on the development and contraction of migration and on their relations to the spread of economic activity and depression. Thus more correct interpretations of the figures relating to one country become possible.

As a last example of international need for adequate migration statistics, it may be pointed out that the success and failure of measures taken by the different countries to regulate migration and to facilitate the

adaptation or assimilation of immigrants are of special international interest. Since migrations involve people of different nations, it is particularly desirable from the point of view of good international relations to avoid measures that are either unnecessarily harsh or inefficient. Statistics on the development of immigration and on the adaptation of immigrants should contribute useful indications for the selection of policies and methods which prove acceptable and efficient, and make it possible for each interested country to gain by the experience of other nations.

Whenever comparisons between conditions in various countries are attempted, it is of course required that the statistics be comparable; otherwise spurious conclusions would be drawn from differences corresponding to variations in definitions or methods and not to real phenomena. ,

It is hardly necessary to note that migration statistics are not the only source of statistical information on international migrants. For many purposes, it is desirable or necessary to use available migration statistics jointly with other data such as population census results concerning the foreign born and aliens; statistics of aliens and alien workers, often derived from special registers; vital statistics, whenever they are tabulated separately for natives and foreign born, or citizens and aliens; results of special surveys on alien residents, etc.. It does happen that such indirect statistical information on migration is the only one available, in a given country, or that it is more detailed or more reliable than the series of migration statistics proper, existing for that country.

3. Types of Organizational Arrangements

Before entering into the question of the organizational set-up for migration statistics, it is desirable to clarify the subject by drawing a distinction between three different kinds of migration data: (a) those collected at the occasion of the actual movements of people across international frontiers, mostly as a by-product of the administrative operations of frontier control, (b) those obtained in connexion with population registers, and (c) those resulting from special enquiries made for a specific purpose, such as for example the special census of aliens taken in France in 1945. Although several of the organizational problems considered here arise in connexion with each of these three types of data in not very unsimilar terms, it is with the first type in view that this report proceeds henceforth. The reasons for this delimitation of the subject are quite simple. From the point of view of organization, little of general interest can be said about special statistical enquiries on migration which is not equally valid for the bulk of the data; in addition special enquiries in this field do not take place so frequently as to deserve here detailed consideration. On the other hand, very few countries in the world, less than six, have a system of continuous population registration from which it is possible to derive valid migration statistics, and there is no definite reason to expect that more countries will adopt population registration in the near future; it is moreover probable that if any country should do so, the consideration of migration statistics will weigh relatively little in the major decision involved. It is therefore more realistic not to present the organization problems of migration statistics in terms of a situation that obtains so rarely.

It will, then, be with the more common type of migration statistics in view - those collected on the basis of this quite simple fact that is the movement of persons across international boundaries - that the major problem of organization in migration statistics, will now be considered. It may be formulated as the analysis of the position of the offices or units responsible for migration statistics within the set-up of public administration, statistical or general. The

words offices or units responsible for migration statistics have been used in the plural, because the situation is often met where different units collect the data and process or tabulate them; it even happens that several different offices collect some migration statistics, one being, for instance, responsible for data concerning persons travelling by sea, another for persons crossing land borders.

These are only examples of the very great diversity between the various countries of the arrangements for obtaining migration statistics, and often of their great complexity. Diversity and complexity that are probably greater than in most other statistical fields of corresponding importance.

In a number of countries, a special department is in charge of the control of immigration or emigration and is responsible, under the law of the land, for the collection of migration statistics; this is the case for example in Italy, Mexico, Spain and the United States. In certain countries, a general administrative department collects migration statistics, for instance the department of Customs in New Zealand, where it would not be possible for the data to be collected by the Census and Statistics Office, because the Census and Statistics Act provides for absolute secrecy of any information obtained under its provision, whilst several departments such as Police and Customs, require access to the forms used in collecting migration data. As has been mentioned above, more than one department often takes part in the collection of migration data which to a certain extent complement one another. For instance in the United Kingdom, the Home Office compiles statistics of alien migrants, and the Board of Trade data on overseas migrations of nationals as well as aliens, while the Registrar General obtained certain migration statistics among the National Registration data. In France, the Ministry of Labour and Social Security collects information on migrant workers, and the Ministry of the Interior obtains certain data through frontier control operations. A good example of the complexity of the machinery for obtaining migration data is provided by the statistics of Thailand which in 1937-39 comprised some

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data obtained from the Royal State Railways, some from the Police department and some from the Customs department; as the notes in the Statistical Yearbook of Thailand duly and carefully explain, the statistical coverage of each series is dictated by the administrative needs of the department compiling it, so that it is not possible to derive from them an integrated picture.

It is desirable and possible to distinguish in this complex picture four main types of organization for migration statistics.

In the first and simplest case, migration data are collected, tabulated and published by the immigration or emigration department, which enforces the legislation regarding inward or outward movements of peoples. In this set-up the immigration department will have a statistical section, entrusted with obtaining the data required under the law or needed by the various users.

In a second main type of organization, the data are collected by the agents of a general administrative department (for example, customs or police) posted at the various frontier points, in accordance with the technical instructions issued by the central statistical service of the country; the latter assembles the basic data, classifies them and prepares the tabulations for publication.

In a third type of organization, the agents of a general administrative department (such as customs or police) collect migration data, and these are processed and published either by the same department or by another general administrative department, for example the ministry of labour, having a competent statistical section. The technical instructions for the collection of the data may then emanate from the collecting department, from the processing department, or from the central statistical service, depending on the general administrative organization of the country, on the statistical personnel available in each in-terested ministry, on their interest, and, of course, on the historical and personal accidents which come into play anywhere when it comes to defining administrative jurisdictions.

The fourth and last type of organization is characterized by the collection of migration data by several administrative departments, the series complementing one another to some extent, sometimes overlapping and rarely if ever providing a complete, integrated picture of migration for the country concerned. The processing and publication of the statistics may be carried out either by each collecting department, by one of them having a better statistical equipment, or by the central statistical service. With respect to technical instructions, the same variety obtains as in the case of the third type of organization.

It may be observed that these various types of organizations bring into play three basic functions: collection of the data, processing (publication being here considered as part of processing, for the sake of language simplicity), and determination of statistical standards and procedures. One or more government departments carries out these functions; among these departments, may be found the central statistical service in so far as the processing of the data and the determination of standards and procedures are concerned. There is only one known instance of a central statistical service being directly engaged in the collection of migration statistics based on frontier crossings, that of Ireland, where certain data on migrants and travellers are collected, by special port and frontier agents of the Central Statistics Office at Dublin, operating a continuing sampling scheme designed specially for that purpose; a brief description of that scheme will be found in chapter III.

The description and analysis of organizational arrangements for migration statistics can thus be finally summarized in the following table:

Functions and Types of Organization for Migration Statistics

Determination of statistical standards and procedures	Collection of the data	Processing of the data (incl. publication)
Either: central statistical service or: immigration service or: one, or more, general administrative departments (e.g. ministry of labour; ministry of interior)	Either: immigration service or: one, or more, general administrative departments (e.g. customs; police)	Either: central statistical service or: immigration service or: one, or more, general administrative departments (e.g. ministry of labour; ministry of commerce)

It is of interest to analyze the possible advantages and disadvantages of these various types of organization. Much that will be said in this respect is perforce common to many fields of statistics, although some considerations quite specific to migration statistics can be set forth.

The determination of standards and procedures and the processing of the data by the central statistical service presents the following advantages: (1) it is favourable to a co-ordinated utilization, for statistical purposes, of the information collected by various authorities at the occasion of frontier control; this is a

point of special importance for the improvement of migration statistics, to which the United Nations Population Commission has called attention repeatedly; (2) it is favourable to the co-ordination of migration statistics with other national data; (3) it enables experts in statistical procedures and techniques, such as sampling, to contribute more easily and directly to the development of migration statistics; (4) where the central statistical service has a more extensive technical staff of classifiers and computers and possesses more elaborate mechanical equipment than other departments, these can be used for migration statistics, thus reducing the cost of these statistics and contributing to economies resulting from larger-scale utilization of the staff and equipment; (5) the publications of the central statistical service often will offer a more accessible and appropriate medium of publication for migration statistics than the special series of a department such as customs, police or labour.

It may be noted that while the intervention of a central statistical service is generally conducive to the five advantages mentioned above, some or most of these advantages may also be obtained if a well-staffed specialized statistical unit within a general administrative department has responsibility for the determination of statistical procedures for migration statistics and for the processing of these data. This is particularly true in a country where a large immigration service has been established.

There are, on the other hand, some disadvantages or risks inherent in a set-up where decisions on procedures are taken, and where migration data are processed, by a centralized statistical office: (1) within the wide field of responsibilities of a central statistical service, migration data are apt to receive less attention and a smaller allocation of financial resources than within a department where there exists a direct and live interest in migration, for policy and administrative reasons; (2) the staff of a central office may not have as detailed a knowledge as the staff of a specialized department of the data and of the conditions under which they are, or may be, obtained.

Considering now more particularly the arrangements for collecting migration statistics, we may make the following observations: (1) the collection of all migration statistics by a single department is advantageous from the point of view of good co-ordination, if the department responsible is able to use for statistical purposes the information obtained by the other authorities participating in frontier control, such as customs, exchange control, health service; otherwise it may lead to duplications of forms required to be filled in by migrants or travellers; (2) on the other hand, the collection of migration statistics by various specialized departments, as part of their general administrative duties, may be more economical than the collection by a single department; it may also make it possible to utilize fully the specialized knowledge of the agents of these departments in each

aspect of frontier control on which statistics are based; for example savings on costs may be effected if shipping authorities collect data on immigrants arriving by sea, and police authorities on aliens arriving by air and through land frontier.

In the preceding paragraphs, it has not been considered appropriate to present any general conclusions in favour of any type of organization or against any other. The appraisal of the organizational arrangements for migration statistics, or the determination of the best arrangements in this field for a given country, can only be made effectively on the basis of the knowledge of a concrete situation. The administrative arrangements for migration statistics are always dependent very largely on considerations much broader than migration statistics. These considerations include: (1) the general statistical organization of the country, whether there is or not a central statistical service, what its jurisdiction is; (2) the legislation on migration and international travel, determining the controls imposed on migrants and travellers, which controls constitute in general the basis for the collection of statistics; the legislation sometimes also specifies certain statistical information which the administration has the statutory obligation to produce at given intervals of time; (3) the length and type of frontiers, whether land, sea or both, and the relative importance of travel by air to and from the country concerned; (4) the needs for migration statistics in the various administrative departments (labour, census, commerce, etc.) and in public or private research and welfare institutions of the country; (5) last, but obviously not least, the budgetary restrictions and the limitations in the number and quality of technical personnel available.

The following considerations however emerge as valid and important whatever the exact type of organization for migration statistics exists or is being contemplated: (1) in collecting migration statistics at the occasion of frontier control, arrangements should be made for using for statistical purposes the information obtained by the various authorities participating in the control; (2) adequate statistical standards and procedures should be formulated and enforced all along the line, from the stage of collection to that of publication of migration statistics; (3) if the procedures for migration statistics in a given country call for special techniques such as statistical sampling, the advice of a competent specialist should be sought.

In order that an improvement of migration statistics may be achieved, these considerations should receive attention when basic statutes on statistics and migration are prepared; they should also be given due weight in annual budgetary allocations and in current administrative decisions. It is clear that the quality of migration statistics will depend also on good continuing co-ordination between the various departments and authorities involved in the production of these data. Attention will now be given to that aspect of the problem.

i. Co-ordination of Migration Statistics with Data in Related Fields

As indicated at the beginning of this chapter, the migration statistics of a country are in close relationship with its travel statistics, demographic statistics and labour statistics, and with the migration statistics of other countries. Consequently, two main problems of co-ordination require attention: first, ensuring that the same definitions of migration are used throughout and applied uniformly; secondly, achieving the use of common nomenclatures for the classification of related data in the different fields.

If migration is, for example, defined differently in the broad classification into categories of arrivals and departures and in detailed tabulation of migrants by occupation, the difference in the total figures, that would agree if the definition were the same, will cause the users of the data to doubt the value of both series and perhaps the competence of the departments publishing them. As detailed information on the definition used is not often made available to the public, few if any users will be able to determine which are the best figures for their purposes. Adequate co-ordination would avoid these embarrassments; if, for some good reason, the definitions had to be different in the two cases, co-ordination would at least ensure that all necessary explanations are given or perhaps that the difference between the two conflicting figures is analyzed and its meaning made clear. If migration is defined differently in two countries, the same migratory movement between them will be recorded differently in the statistics of the country of emigration and in those of the country of immigration; the determination of the most reliable data is generally very difficult, sometimes impossible. A great deal of the disrepute attached to migration statistics is due to differences of that kind.

The use of common or convertible nomenclatures for classifying related data in the different fields is of no less importance. For example, if the following age groups are used in migration statistics: 0-12, 13-18, 19-21, etc., while census results for the same country are tabulated according to standard five-year age groups (0-4, 5-9, 10-14, etc.), the study of the influence of migration on the sex and age composition of the population will require estimates of the number of persons classified according to one of the two systems of age groups; not only are these estimates costly to make, but they can only be approximate. Similarly, if migration statistics and census results are tabulated according to different nomenclatures of occupations in a certain country, the analysis of the relation between migration and the occupational distribution of the population will be much complicated, if not made impossible. It is desirable also that statistics of migrants and estimates of surpluses and deficits of manpower be classified according to the same or convertible nomenclatures; otherwise it becomes impossible to follow the process of recruitment of alien workers through to the actual movements of these persons, and compare the estimates with the actual facts.

The use of identical nomenclatures for several classes of related statistics may not always be possible. Different nomenclatures may be specified by statute or general administrative regulations affecting the different fields. It is, however, possible to meet the statistical problems created by this situation - if it has to be accepted - through good co-ordination. One of the nomenclatures in point may be subdivided until it becomes convertible into the other; alternatively, it may be possible to make, periodically or not, a double tabulation of the less numerous data according to the two nomenclatures considered. These methods also apply for making comparable migration statistics of different countries not both using internationally accepted or recommended nomenclatures.

ii. Co-ordination among Interested Departments

The description and analysis of the principal types of organizational arrangements for migration statistics have brought out the importance of co-ordination between the interested administrative departments for the production of good migration statistics at a reasonable cost. The principal problems of co-ordination arising from the division of responsibilities for migration statistics between several agencies may be described as follows: (1) eliminating available duplications between the elements of information collected and published by the different agencies, and ensuring that these elements cover the field without leaving serious gaps; (2) ensuring the adequacy and uniformity of the statistical standards and procedures used throughout; (3) taking into account the requirements of the various users of migration statistics, so that the immediate needs of the agencies collecting the data are not the only ones to receive consideration; (4) ensuring that the information collected is utilized to the fullest extent allowed by budgetary appropriations and, on the whole, to the best advantage of the users. Each of these problems will now be briefly considered in turn.

On the first problem, nothing further needs to be said, since it is elementary and its description is self-explanatory, except that it is still a very real one in many countries.

The determination of adequate statistical standards and procedures for all departments participating in the production of migration statistics should result in efficient utilization of available financial resources. It should avoid the rather distressing situation that occurs when two agencies publish different figures purporting to represent the same thing. The standards and procedures should constitute a well-co-ordinated whole, free of internal contradictions, concerning all phases of operation from the collection of basic information to and including the publication of final figures on migration.

Examples of the variety of uses of migration statistics have been given in the preceding sections. It is

clear that the needs of every possible user of migration statistics cannot receive the same weight. A compromise must be reached between the desire for keeping down the number of questions asked from migrants, the limitations of resources in money and competent staff and the needs of users of migration statistics.

Since information is never collected without expenditure being incurred, and a measure of inconvenience being imposed on members of the public concerned, it is obviously desirable to ensure that whatever information is obtained is as fully utilized as resources available for processing it will allow. This general statement is particularly relevant to migration statistics, as evidenced by the repeated recommendations made to that effect by experts. Too often, valuable information extracted from travellers and migrants remains buried in administrative archives, while imperfect migration statistics, based on less complete knowledge of the facts, are processed and published.

The implementation of co-ordination in migration statistics may in certain cases demand legislative action, as when it is desired to uniformize nomenclatures prescribed by statutes and differing only by historical accident or considerations that have outlived their validity. In general, however, the required co-ordination will be achieved through internal administrative action by means of inter-departmental committees or working parties, such as those established in several countries for studying the United Nations 1949 provisional recommendations on migration statistics and preparing observations for their revision. A useful function of such groups is to review statistical questionnaires required from travellers and migrants by various departments, such as immigration, police, customs, exchange control, public health. This enables questions to be formulated in a uniform manner and

facilitates the utilization of the same form for several purposes, to the advantage of the travellers and often of the public treasury.

The problem of achieving a measure of concerted action between the authorities concerned with migration statistics in different countries deserves a reference, because of the special importance of international comparability in this field. Although they may be legally and formally different from the processes of internal co-ordination considered here, the methods for achieving international comparability of migration statistics are functionnally rather equivalent to these processes. The utilization of definitions, procedures and nomenclatures discussed and adopted at international meetings of experts is the most common means to achieve international comparability; it is fully effective as far as the international standards and nomenclatures go and are not subject to widely differing interpretations. Special arrangements between two or several countries, for the purpose of facilitating the collection of statistical information are another possibility, though less frequently resorted to, so far, in the field of migration statistics. The conclusion of such arrangements has been suggested more than once by the United Nations Population Commission, Statistical Commission and Sub-Commission on Statistical Sampling. It has been recently recommended to the attention of governments by the Economic and Social Council,[3] and is receiving attention from the Organisation for European Economic Co-operation. Since it is desirable to have certain features of the operational procedures for migration statistics present in mind in order to visualize the content of the arrangements envisaged, that aspect of the question will be considered in the next section; it is also covered in some detail in the 1953 recommendations on migration statistics.[4]

5. Major Problems of Operation

In the preceding section on co-ordination, several problems of operation involving a combination of efforts by several government departments have been mentioned. The main operational problems involved in collecting and processing migration statistics will now be considered directly.

1. Collection of Migration Statistics

The collection of migration statistics at the occasion of frontier control - the only case considered here, as explained in section 3 - requires the department responsible for that operation to have agents at the frontier points, authorized to request from international travellers the statistical information desired. In general, this information is needed for the administrative control of persons moving across the frontier, and the statistics are obtained exclusively or mostly as a by-product of administrative operations. We are however considering here these control operations only in so far as they affect the collection of statistics. It is of great importance to note that, in spite of the fact that statistics may be obtained through administrative controls, the statistical operations can always be distinguished, at least conceptually, often materially, from the control operations of which they are a

by-product. Greater clarity in the formulation of statistical standards and procedures is achieved when this distinction is maintained. In addition, it will often be found that more flexibility and adaptability to circumstances are possible in statistical operations, concerned with characteristics of groups, than in enforcement of administrative controls aimed at individuals, with some rigidity being in the nature of things. The following operations are of importance at the stage of collection of migration statistics: defining the various statistical categories of travellers so that each person may be readily classified where he belongs, establishing adequate and economical procedures, and making them acceptable to the travellers and to the authorities involved in the operations.

The formulation of generally acceptable definitions in the field of migration statistics has long been a basic difficulty in the path of the improvement of this class of statistics. However, definite progress has been made during the last few years, thanks to the generous co-operation extended to the international organizations and particularly to the Secretariat of the

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[3] See page 15 below.
[4] See page 16 below.

United Nations by the central statistical services or by the departments responsible for migration statistics in various countries. Notwithstanding the remaining difficulties, there are good reasons for hoping that the revised recommendations that have been formulated early in 1953 by the Population Commission and Statistical Commission of the United Nations contain a set of widely acceptable definitions to which national statistics will gradually conform more and more closely, at least for the more important categories of permanent migrants. A brief description of the kind of statistical operations involved in the collection of migration statistics is given hereafter, on the basis of the 1953 recommendations.

The distinction between frontier traffic and the movements of all other travellers may be considered first. The differentiation can usually be made on the basis of the special simplified travel documents (frontier crossing cards) which frontier residents are often allowed to use in their frequent moves across the border; at small frontier posts these persons are generally known to the control officers. The actual classification of the other travellers into the major categories of arrivals and departures may be simplified to the maximum since only the total number of persons in each category is required; only two elements are involved: the usual place of residence of the traveller, and subsidiarily the actual or intended duration of the stay or absence. There are few countries where frontier controls, including customs, are so simplified, at least on entry, that the enforcement officers do not require this information to perform their main functions; besides, the answer to the main question (place of residence) is generally provided by the passport or other travel document. Temporary immigrants, where this category is recognized, distinguish themselves from visitors by their intention to exercize temporarily an occupation in the country which they enter; they will generally be in possession of a permit to work which may serve as a convenient basis to classify them. The question on intended length of stay (or absence) makes it possible to separate permanent migrants from other travellers, on the basis of the duration of more than one year of their intended stay, or absence. The 1949 provisional text and the 1932 recommendations drew the line at one year or more; the new definition, on the other hand, is in accord with the earlier proposal made by the International Labour Office to the 1932 International Conference on Migration Statistics. The difference is rather slight, although the number of travellers with entry or working permits of exactly one year's duration is often not negligible. If these permits indicate the intended actual duration of the stay, the migration is properly classified as temporary; if they merely represent a first step towards more permanent admission, the migration is intended to be of more than one year's duration and should be classified, for statistical purpose, as permanent. The much more detailed information to be elicited from permanent migrants and perhaps from temporary migrants, which make up in general only a small proportion of the travellers, will be collected through an individual statistical slip

or questionnaire; in view of the statistical nature of that form, no document or other evidence need be required for the sole purpose of supporting the information given on it. It is important that the questions contained in the statistical slip should take into account not only the immediate administrative needs of the department collecting the data, but also those of the various users of migration statistics, statutory, official and private; the special desirability of having internationally comparable data on a subject which is in essence an international one should also receive due consideration when the questions are drafted.

When formulating precise statistical procedures for the operations described above very briefly, too much attention cannot be paid to the desirability of achieving all possible economies not only in costs of administrative work but also in delays imposed on travellers. Securing the co-operation of the authorities which will apply the procedures and of the public, is also a necessity. Enforcement officers of the immigration, police or customs departments cannot be expected to have been trained in statistical procedures in their own corps. It is useful to realize that their training has been developed on lines somewhat contrary to those required by the collection of statistics, since it is aimed at discovering individual situations, not at arousing interest in figures describing the characteristics of anonymous groups. Providing these officers with explanations on the importance and aims of statistics, and with some form of elementary training in this subject would therefore be appropriate. Success requires that the higher echelons of these corps be persuaded by the interested statistical services of the importance of collecting adequate migration data. With regard to the public, one can observe that it may be better to begin by collecting data on a voluntary basis, and make occasional checks to estimate the errors due to cases of non-response, than to arouse wide public protests against new compulsory procedures that may not have been well broken in. It will also be noted that controls being generally stricter on entry than on departure, statistics of immigration will be more easily collected, and often be available in more detail, than statistics of emigration. It has been indicated in section 2 that the migration statistics published by countries of immigration, classified by country of last permanent residence, are sometimes the best source of information available for measuring emigration from certain countries.

As mentioned earlier, advantages could be derived by neighbouring countries from reciprocal arrangements for the collection of migration statistics. Possible objects of such arrangements include avoiding, as far as possible, the repetition of questions to the same travellers when they leave one of the countries and when they enter the other; providing facilities for the distribution of forms before the frontier is reached, thus giving additional time for filling them in, tabulating the statistics of a country of immigration so as to provide data desired by certain countries of emigration. Such arrangements, limited to statistics, can much more easily be made than if they were to embrace the actual frontier control operations

which are closely related to the exercise of national sovereignty. This example may serve to illustrate the distinction presented above between the statistical operations and the administrative control on which they are, as it were, grafted.

Although the application of sampling to migration statistics is still in the experimental stage, there is no reason to believe that this technique could not be useful in certain cases to provide reasonably good data economically and with reduced inconvenience to travellers. This is also a case where regional arrangements may prove advantageous for operating simply and effectively a continuous sampling scheme for the collection of migration statistics. Further information on this question is given in chapter III.

ii. Processing of Migration Statistics

The operations involved in the processing of migration statistics will require only brief development. On the sorting of the data, their classification and tabulation, little can be said that would be specific to this class of statistics, except in so far as nomenclatures are concerned; this point will however be more conveniently taken up in the next section on international recommendations pertaining to migration statistics. The last phase of the processing, that of publication, calls for an observation in view of the particular situation of migration statistics in this respect. In several countries, detailed statistics on migration are scattered in the special publications of the collecting and processing agencies. Many potential users of migration data, such as economists and demographers, do not have current access to such publications or would not think of consulting them unless they are quite specialized in migration. This situation has prompted the United Nations to assemble with the help of governments an authoritative Bibliography of Statistics on International Travellers and Migrants, which is now in an advanced stage of preparation and should be published in 1954. However, a more permanent and effective remedy lies in the inclusion of migration statistics, in each country, in a statistical publication of broad interest, likely to be easily available to the wide diversity of users: administrators, economists, manpower specialists, demographers, sociologists, etc... An improvement in this respect has fortunately taken place during the last few years in certain countries, for example the Netherlands.

6. Principal International Recommendations

i. Historical Development

The imperfections of migration statistics and the recognition of the need for their improvement have prompted many efforts to establish uniformly acceptable definitions and efficient collection procedures for these statistics. During the nineteenth century and at the beginning of the twentieth, some consideration was given to migration statistics by the International Statistical Institute at its sessions of Vienna in 1891, Budapest in 1901 and Berlin in 1903, and again at the sessions held at Rome in 1926, Warsaw in 1929 and Madrid in 1931. Migration statistics were also considered at the International Conference on Emigration and Immigration at Rome in 1924, and at the Commercial Conference of the Inter-Parliamentary Union held at Rio de Janeiro in 1927. An analytical summary of the salient points in these recommendations is given in "Problems of Migration Statistics" published by the United Nations in 1949. In addition, the Committee of Statistical Experts of the League of Nations considered international tourist statistics at their fifth session in 1936, and made on this subject some recommendations that are relevant to the classification of arrivals and departures. It will be noted that the word tourist is used with a wider meaning in the League of Nations recommendations than in the recent United Nations recommendations; the difference is explained in paragraph 6 of the Introduction to the 1953 Recommendations for the Improvement of Migration Statistics.

The efforts of the International Labour Organisation and of the United Nations in this field have been persistent and systematic, and deserve more detailed attention. Since its creation just after the first World War, the International Labour Organisation has been concerned with the international co-ordination of migration statistics, considered mostly from the manpower angle; various technical bodies of the United Nations Organization have also been active in promoting the improvement of these data from the broader demographic, economic and social points of view. The text of the recommendations and resolutions on migration statistics passed by the International Labour Conference in 1922, the resolutions of the International Conference on Migration Statistics convened in 1932 at Geneva by the International Labour Organisation and the 1949 Draft Recommendations for the Improvement of Migration Statistics, prepared by the United Nations Population Commission and endorsed in the same year by the Statistical Commission, can all be found in "Problems of Migration Statistics" as well as in the original reports of the conferences or commissions.

The 1949 provisional recommendations were revised at the beginning of 1953 by the Population Commission and the Statistical Commission, taking into account the previous international resolutions and recommendations on the subject and the results of extensive consultations with the competent statistical departments of the countries interested in this subject. The text of the 1953 recommendations is given in the next chapter.

The United Nations Sub-Commission on Statistical Sampling considered in 1950 the application of sampling methods to the collection and tabulation of statistics on international migrants and travellers. The Sub-Commission's report points out that sampling has not been used extensively in this field, and that experimentation will be desirable to determine the methods best suited to various conditions; the operative part of this report, reproduced in chapter III, contains suggestions for conducting such experiments.

ii. Recommended Methods of Collection and Nomenclatures

The 1953 recommendations cover the methods of collection of migration statistics and indicate preferred nomenclatures for the principal tabulations.

For obtaining migration statistics, two methods are recognized in the 1953 recommendations: collection at the occasion of frontier control, and collection through entries in population registers in countries where they have been established.

The nomenclature for major categories of departures and arrivals has been referred to in the first section of this chapter. In this connexion, it is observed in paragraph 8 of the Introduction to the 1953 recommendations that "from the point of view of statistical reliability and comparability, there would be great advantage in having total figures of arrivals and departures with a breakdown into major categories. The interpretation of the statistics for a given country becomes clearer when figures for different categories of arrivals and departures can be compared, especially over a number of years. Estimates for groups of persons not classified uniformly in the different countries may become possible and thus a certain degree of international comparability attained at a minimum cost. Utilization of the statistics in conjunction with other demographic data (census and vital statistics) is also much facilitated".

For countries of intended or last permanent residence, for age groups, for occupations and for status, the nomenclatures recommended are, as far as possible, either the ones that have been proposed by international expert bodies for use in population censuses or major divisions of these census nomenclatures. For the classification of migrants by occupation, reference is made to the International Standard Classification of Occupations, of which the Seventh International Conference of Labour Statisticians adopted ten major divisions in 1949, and to the International Classification of Occupations for Migration and Employment Placement, developed by the International Labour Office. Where it is desirable or necessary to have special nomenclatures for migration statistics, it is recommended that they be consistent with the nomenclatures used in tabulating the results from population censuses in the same country.

iii. Recommendations Relevant to Organizational and Operational Problems

In the 1953 recommendations, as in the earlier ones, it is often indirectly that organizational problems of migration statistics are referred to. The proposal of certain statistical procedures for collecting the data has a definite bearing on the organization of the departments responsible for the collection, although it is far from completely specifying that organization. The 1953 recommendations contain, however, at least six direct references to administrative procedures, some of which have been mentioned earlier.

The first is that the totals of the major categories of arrivals and departures be obtained on the basis of a simple count, that is without imposing a statistical questionnaire on all travellers.

The second, that no document or other evidence be required for the sole purpose of supporting the declarations made on the statistical slips required from permanent and temporary migrants.

The third, that where migration statistics are compiled by other authorities than those responsible for general population statistics, it may be desirable that the latter receive a duplicate of the statistical slips.

The fourth, that the statistical slips may be made part of forms having to be completed under existing regulations (such as landing cards, customs or exchange declarations); this suggestion implies that the originals or copies of these forms will be made available to the department responsible for collecting migration statistics.

The fifth reference to administrative procedures emphasizes, as the Population Commission had done in earlier reports, that if the various authorities concerned in each country with the different aspects of frontier control would co-ordinate the information they collect, so as to facilitate the utilization of that information for obtaining valid and meaningful statistics, it should become possible to achieve a considerable improvement of migration statistics without complicating further frontier crossing formalities, or even interfering with their simplification.

The sixth, that arrangements between certain countries for the collection of migration statistics could be made to the mutual advantage of the contracting parties. These arrangements need not touch upon the rights of each country to exercise at its discretion control over persons crossing its frontiers. Their object may be limited to certain administrative operations such as the distribution of forms before the frontier is reached, or may include the joint compilation of migration statistics.

II. RECOMMENDATIONS FOR THE IMPROVEMENT OF INTERNATIONAL MIGRATION STATISTICS

1. Resolution of the Economic and Social Council

The following resolution, No 469-E (XV), was adopted by the Economic and Social Council on 27 April 1953 on the report of the Statistical Commission:

"The Economic and Social Council,

Recalling its concern for the improvement of statistics on migration,

Taking note of the recommendations[a] for the improvement of international migration statistics which the Population Commission and the Statistical Commission have developed with the advice of the governments of Member States,

1. Calls the attention of interested governments to the above-mentioned recommendations as a means of increasing the usefulness and comparability of statistics of international migration;

2. Expresses the hope that interested governments will give consideration to the conclusion of suitable mutual arrangements for the collection of migration statistics, as suggested in the recommendations noted above, as a means of achieving improvements in these statistics without introducing impediments to the movement of people."

2. Recommendations Adopted by the Population Commission and the Statistical Commission[b]

i. Introduction

1. The series of recommendations set forth below are a revision of the 1949 draft recommendations for the improvement of migration statistics (E/1313, annex 3) in the light of the results of detailed consultations between the United Nations Secretariat and governments, and of further study of migration statistics by the Secretariat in consultation with the International Labour Office. It is recalled that in the formulation of the 1949 draft recommendations, account had been taken of the resolutions of the 1932 International Conference of Migration Statisticians, of other relevant international recommendations and of a survey by the Secretariat of the methods of collection and types of classifications of the migration statistics of sixty-nine countries and territories, published by the Secretariat under the title "Problems of Migration Statistics."[1]

2. It is realized that differences between countries in the length and geographic nature of frontiers, volume of migration, national legislation regarding the control of migration, and other factors, do not make it possible to lay down a set of even minimum standards which all countries can forthwith implement fully. A few countries already publish migration statistics

more detailed than those recommended. Other countries may be able to meet only some of the recommendations.

3. The recommendations describe in detail the steps to be taken in order to make migration statistics more reliable and useful for analysing migrations from the demographic, manpower, social and economic points of view.

4. There are distinct advantages for individual governments in having detailed standards and definitions for international migration statistics developed as far as possible by the international organizations. In particular, this is almost necessary for attaining international comparability of migration statistics.

5. The 1932 resolutions define migration as including all international population movements except tourist traffic, while the definition of temporary migration excludes frontier traffic.[2] During the last fifteen years, however, the numerically more important international movements of population in the world have been transfers and displacements of populations, and repatriation and resettlement of refugees. These are categories which the 1932 Conference did not take into consideration. Population transfers and refugee movements are different in character from the normal movement to which migration statistics have previously related almost exclusively. The recommendations provide for statistical information on movements of refugees and transferred populations; figures for these categories may be shown separately.

6. No systematic attempt has been made to include detailed abstract definitions in the recommendations. It has been considered more effective to delineate the different concepts by detailed recommendations on the collection and classification of the data. These show the basic concepts to which the figures correspond; these concepts do not in general conflict with the definitions given in the resolutions of 1932. One difference

[a] See section 2 below.

[b] The text of the recommendations, including the Commissions' introduction, is taken from the "Report of the Seventh Session of the Statistical Commission (E/2365), Annex 4. The paragraphs and footnotes are numbered as in the original document. Minor editorial corrections have been made in the text originally published.

[1] United Nations, 1949, Population Studies No. 5, Sales No. 1950. XIII.1. This publication also contains the text of the 1949 draft recommendations, the 1932 resolutions, and the recommendations and resolutions adopted by the International Labour Conference in 1922. Recommendations concerning the application of sampling to migration statistics are given in E/CN.3/114, chapter VIII. Recommendations on international tourist statistics, formulated in 1936 by the fifth session of the Committee of Statistical Experts of the League of Nations, are given in League of Nations document C.456.M.270.1936.II.A; they are relevant to the classification of arrivals and departures and therefore also, in a measure, to migration statistics.

[2] Frontier traffic is the movement of persons residing in the frontier areas, moving frequently across the border and often authorized to use simplified travel documents (frontier cards).

between the present recommendations and those of the League of Nations Committee of Statistical Experts on tourist statistics is that the former define tourists as visitors for holiday purposes, while the latter use the word tourist to describe all categories of visitors (for holiday, business, study, etc.). It is believed that the common acceptation of the word tourist corresponds to the use made of it here.

7. From the point of view from which the recommendations are formulated, it is more particularly important that accurate and comparable figures of the total numbers and main classifications of "permanent immigrants" be given for each country. Statistics on "permanent emigrants" are also important. However, it is realized that in countries which are not mostly countries of emigration, controls over departures are less strict than over arrivals, so that statistics of emigration are generally more difficult to collect and less accurate than statistics of immigration.

8. The draft recommendations contain proposals for the collection, classification and tabulation of statistics for the different categories of arrivals from, and departures to, other countries. From the point of view of statistical reliability and comparability, there would be great advantage in having total figures of arrivals and departures with a breakdown into major categories. The interpretation of the statistics for a given country becomes clearer when figures for different categories of arrivals and departures can be compared, especially over a number of years. Estimates for groups of persons not classified uniformly in the different countries may become possible and thus a certain degree of international comparability attained at a minimum cost. Utilization of the statistics in conjunction with other demographic data (census and vital statistics) is also much facilitated.

9. The recommendations take into account the development of air travel, and the importance of collecting migration statistics in such a way as not to complicate further the formalities attendant upon the crossing of frontiers.[3]

10. In this connexion, attention is called to the views emphasized by the Population Commission at its 1950 session that "considerable improvement of migration statistics could be achieved without complicating further the formalities attendant upon the crossing of frontiers. The Commission is of the opinion that this improvement could be achieved even where frontier formalities are substantially simplified in accordance with resolution 147-G (VII) of the Economic and Social Council, especially if, in each country, the various authorities concerned in frontier controls would coordinate their operations with a view to facilitating the collection and analysis of the appropriate statistical data".[4]

[3] "Resolutions adopted by the Economic and Social Council during its Seventh Session" (United Nations Publication No. 1948. I.9, page 11, resolution 147-G (VII)).
[4] Report of the Population Commission, fifth session, E/1711, paragraph 33.

11. The Sub-Commission on Statistical Sampling formulated in 1950 some suggestions and recommendations for conducting experiments on the application of sampling techniques to the collection and tabulation of migration statistics.[5] On the basis of such experiments, it may be possible to determine continuing sampling procedures suited to the conditions prevailing in a given country. It would be desirable that countries carrying out such experiments would inform the United Nations Secretariat of their results, so that they may be made available to the statistical offices of other interested nations.

12. Attention is also called to the possibility of arrangements for the collection of migration statistics being made between neighbouring countries, particularly between countries having common frontiers crossed each year by a large number of international travellers. Arrangements limited to statistical procedures need not touch upon the rights of each country to exercise at its discretion control over persons crossing its frontiers. Possible objects of such arrangements include: avoiding the repetition of questions asked for statistical purposes from the same travellers, when they leave one of the countries that are party to the arrangement and again when they enter the other; providing for the distribution of forms before the frontier is reached, so as to give additional time to the travellers for filling them in; facilitating the operation of sampling schemes for the collection of migration statistics; arranging for statistics of immigrants by countries of last permanent residence to be tabulated by countries that are parties to the arrangement in such a manner that they meet the more essential needs of other parties which are interested in statistics on emigration from their territory, and thus fill in a gap in the statistical series of the last mentioned countries.

ii. Recommendations
Methods of collection

13. It is recommended that migration statistics be obtained at the occasion of frontier control. It is recognized that in some countries, population registers have been established which provide a satisfactory basis for obtaining migration statistics. In view of the very small number of such countries, and of the peculiarities of each national system of population registers, recommendations are made only for the collection of migration statistics through frontier control; but this should not be construed as intending to discourage countries which obtain satisfactory migration statistics from population registers from continuing to do so. Recommendations on detailed tabulations (paragraphs 21 to 32 below) apply to migration data obtained from both sources.

14. It is recommended that the attention of countries be drawn to the technique of jointly compiling migration statistics. This technique might in some circumstances be used to mutual advantage by neighbouring countries or by groups of countries, including those

[5] Report of the Sub-Commission on Statistical Sampling, fourth session, E/CN.3/114, chapter VIII.

which have simplified the procedures for crossing their frontiers.

Major categories of arrivals and departures

15. It is recommended that statistics be obtained on all arrivals and, if possible, on all departures of civilian travellers crossing international frontiers, classified in such a way as to show which are migrants. This classification does not apply to frontier traffic.[6] A recommendation concerning the collection of statistics on frontier traffic is given in paragraph 20 below. In the case of countries which have made joint arrangements for the collection of migration statistics, as mentioned in paragraphs 12 and 14, this classification may have to be modified to take account of the nature of the arrangements.

16. Collection. It is recommended that the totals of the various categories of arrivals and departures be obtained, whenever possible, at the occasion of frontier control and on the basis of a simple count. For this purpose, two questions only are required to classify a traveller in categories 2 and 5 of arrivals and departures; a first question on country of permanent residence, a second on duration of stay or absence abroad; to make the distinction between categories 3 and 4, it is necessary to ask the purpose of the visit. These questions are currently asked from travellers at the occasion of frontier control in most countries, so that the collection of statistics in this manner should not complicate formalities. For statistical purposes, documents or other evidence are not necessary; if they are required for control purposes, they may be also used to classify travellers into the major categories.

17. Classification. It is recommended that statistics be tabulated according to the major categories listed below. Categories 2, 3, 4 and 5 being mutually exclusive, no person should be counted in more than one of them. The categories preceded by (s) are those for which it is recommended that more detailed information be obtained on the basis of an individual statistical slip:

Arrivals from other countries
1. Total arrivals (sum of categories 2, 3, 4 and 5).
(s) 2. Permanent immigrants, i.e., non-residents (nationals and aliens) intending to remain for a period exceeding one year.
(s) 3. Temporary immigrants, i.e., non-residents intending to exercise for a period of one year or less an occupation remunerated from within the country (dependents being classified in category 4).
4. Visitors, i.e., non-residents intending to remain for a period of one year or less without exercising an occupation remunerated from within the country (including their dependents). This category may be subdivided according to the purpose of the visit (see paragraph 19 below).
5. Residents (nationals and aliens) returning after a stay abroad not exceeding one year.

- Special classes, i.e., separate figures for groups included in the above categories, to which special interest attaches at a given time, for example: refugees; transferred population; immigrants enjoying special facilities such as government financial assistance, participation of inter-governmental organizations in cost of passage, facilities under bilateral or multilateral agreements.

Departures to other countries
1. Total departures (sum of categories 2, 3, 4 and 5).
(s) 2. Permanent emigrants, i.e., residents (nationals and aliens) intending to remain abroad for a period exceeding one year.
(s) 3. Temporary immigrants departing (dependents being classified in category 4).
4. Visitors departing on completion of visit. This category may be subdivided according to the purpose of the visit (see paragraph 19 below).
5. Residents (nationals and aliens) intending to remain abroad for a period of one year or less.
- Special classes, i.e., separate figures for groups included in the above categories, to which a given country attaches special interest, for example: refugees or transferred population departing; emigrants enjoying special facilities such as government financial assistance, participation of inter-governmental organizations in cost of passage, facilities under bilateral or multilateral agreements.

18. Migration defined with reference to a period of, for example, two years. Some countries are interested in the number of "permanent immigrants" and "permanent emigrants" defined on the basis of an intended stay (or absence) of longer duration than that considered above. In such cases it is recommended that, in order to maintain the international comparability of migration statistics, the one-year definition recommended above be used and the following sub-classification be made (the period of two years being mentioned as an example):

Arrivals: 2. Permanent immigrants, i.e., non-residents (nationals and aliens) intending to remain for a period exceeding one year, of whom "immigrants intending to remain for a period exceeding two years" would be a sub-category.

Departures: 2. Permanent emigrants, i.e., residents (nationals and aliens) intending to remain abroad for a period exceeding one year, of whom "emigrants intending to remain abroad for a period exceeding two years" would be a sub-category.

19. Sub-categories for visitors. Categories 4 of arrivals and departures may be sub-divided so as to provide useful information in particular for the tourist industry. The following sub-categories are recommended to countries interested in breaking down the numbers of visitors arriving according to the purpose of their visit: (i) Transit. (ii) Holiday. (iii) Education: (a) teachers arriving under appointment by educational

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[6] Frontier traffic is the movement of persons residing in the frontier areas, moving frequently across the border, and often authorized to use simplified travel documents (frontier cards).

institutions; (b) students arriving for attending regular sessions of educational institutions; (c) other visitors for educational purposes (e.g., study tours, summer schools). (iv) Business. (v) Other visitors. Visitors departing may be, where so desired, sub-divided according to the same nomenclature.

20. Frontier traffic. It is recommended that the volume of frontier traffic be estimated, separately from the major categories above. These estimates should distinguish the movements of workers. The basis for the estimate should be stated in each case; for example: number of frontier cards issued; number of special season tickets; counts of in- or out-crossings of the frontier by holders of frontier cards.

Recommended detailed statistics

21. It is recommended that detailed statistics as provided below be collected on persons in categories 2 of arrivals and departures, and as suggested in paragraph 31, in category 3 of arrivals, where possible.

22. It is recommended that these detailed statistics be based on an individual statistical slip, collected at the frontier from every person in categories 2 of arrivals and departures (and where possible in category 3) crossing the frontier. In the case of families travelling together, provision should be made whereby the composition and characteristics of such families can be analysed (e.g., by writing the names of the head and members of each family on their respective statistical slips and listing the members of the family on the slip of the head of the family).

23. The slips may be made part of forms which have to be completed under existing regulations (for example, landing and embarkation cards; forms for the notification of change of residence to population register office). In the case of emigration, the population register forms should be collected preferably at the frontier. Where travel documents with detachable coupons are used, these coupons may be adapted to serve the purpose of the slips. It is recommended that no document or other evidence be required for the sole purpose of supporting the declaration made on the statistical slips.

24. It is not considered practicable that the statistical slips should be identical in all countries. But it is recommended that the slips used in all countries should contain at least the questions indicated on the model given in paragraph 32. Since the aim is to attain comparability of the results, rather than uniformity in the wording of the questions which may conceal differences in their interpretation, the exact formulation of each question should be left to the country concerned.

25. It is recommended that the questions be drafted in simple language and in such a way that they can be answered objectively. It is also recommended that a specimen of the statistical slips be published from time to time with the statistics and with some explanation of the definitions and methods of collection used.

26. In the countries where migration statistics are compiled by authorities other than those responsible for general population statistics (census, births and deaths), it may be desirable that one of the latter

authorities should receive a duplicate of the individual statistical slips.

27. It is recommended that tabulations be made for calendar years; in countries where another period such as fiscal year is used in official statistics, it is recommended that at least total figures be published for a fraction of the year chosen so as to make it possible to derive internationally comparable statistics.

28. It is recommended that the following classifications and tabulations be made by every country, separately for permanent immigrants and permanent emigrants (including in both cases nationals and aliens):

(i) A classification for each sex by age, preferably in the quinquennial groups recommended by the International Conference of Migration Statisticians in 1932 (under 5, 5 to 9, etc.). If abridged groups are used, they should at least be compatible with these quinquennial groups. The classification should be based on the age in completed years at the last birthday at the time of emigration or immigration;

(ii) A distinction between nationals and aliens, based on citizenship (i.e., legal nationality); and

(iii) A classification by country of citizenship (i.e., legal nationality) or by country of birth, whichever is the more extensively used in the tabulation of results of the latest population census in the country concerned;[7]

(iv) A classification of immigrants by country of last permanent residence and emigrants by country of intended permanent residence. The specifications regarding the classification by countries recommended in the preceding sub-paragraph (footnote 7) are also applicable here;

(v) In the case of persons of working age, a classification for each sex separately by usual occupation.[8]

29. Attention is drawn to the usefulness of the following additional tabulations for permanent migrants.[9]

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[7] The classification by country of birth should be according to current national boundaries. Cf. "Recommendations for Censuses of Population to be taken in or around 1950" in "Report of the Population Commission, Third Session" (E/805, annex A, part II, paragraph 5). Total figures relating to countries of citizenship or birth not shown separately should be given by continents. The number of persons for whom no information is reported should be given in a distinct group. The classification by continents and countries should be based on the "Nomenclature of Geographic Areas for Statistical Purposes". (United Nations Statistical Papers, Series M. No. 1. 1949.)

[8] An International Standard Classification of Occupations was considered in 1949 by the Seventh International Conference of Labour Statisticians which adopted a list of major occupational groups. The Statistical Commission and the Population Commission at their respective fifth sessions also discussed the question of an occupational classification. See "Application of International Standards to Census Data on the Economically Active Population" (United Nations, 1951, Population Studies No. 9, Sales No. 1951.XIII.2). The International Labour Office has prepared an "International Classification of Occupations for Migration and Employment Placement" (two volumes in three parts, Geneva, 1952).

[9] It is highly desirable that, whenever possible, the nomenclature used in each of these tabulations be consistent with the one used for the tabulation of results from population censuses.

(a) A classification by marital status (single; married; widowed or divorced; unknown) and by number of dependent children accompanying or not.

(b) A classification based on literacy or degree of formal education.

(c) A classification as to whether with a contract of employment or without it.

30. It is recognized that in order to ascertain the reasons that prompt people to emigrate, special inquiries are required. Such inquiries would be undertaken by means of suitable questionnaires, either before the departure or after the arrival of the migrant.

31. Attention is also drawn to the usefulness of obtaining detailed statistics on temporary immigrants (category 3 of arrivals). For this category, tabulations by usual occupation, for each sex separately, and by country of permanent residence, are the most important.

Information to be obtained on the Statistical Slip

32. The individual slip referred to above should provide, apart from any data required for other purposes, the information set out below on persons in categories 2 of arrivals and of departures and, if required, in category 3 of arrivals.

For arrivals from another country[10]

Date:

Country of present citizenship (i.e., legal nationality):

Country of birth (according to current national boundaries):

Sex:

Age at last birthday or month and year of birth:

Usual occupation and usual status (as employer, employee, etc.) in country of emigration:

Intended duration of stay:

If a temporary immigrant, country of permanent residence:

If a permanent immigrant, country of last permanent residence:

Remarks: Indicate if a refugee, or person in assisted migration scheme, etc., as may be required for tabulating data for the "special classes" of the nomenclature given in paragraph 17.

In the case of families travelling together, provision should be made whereby the composition and characteristics of such families can be analysed (e.g. by writing the names of the head and members of each family on their respective individual slips and listing the members of the family on the slip of the head of the family).

For departures to another country[10]

Date:

Country of present citizenship (i.e., legal nationality):

Country of birth (according to current national boundaries):

Sex:

Age at last birthday or month and year of birth:

Usual occupation and usual status (as employer, employee, etc.) in country of emigration:

If a temporary immigrant departing,

Date when arrived:

Country of permanent residence:

If a permanent emigrant, country of intended permanent residence:

Remarks: Indicate if a refugee, or person in assisted migration scheme, etc., as may be required for tabulating data for the "special classes" of the nomenclature given in paragraph 17.

In the case of families travelling together, provision should be made whereby the composition and characteristics of such families can be analysed (e.g. by writing the names of the head and members of each family on their respective individual slips and listing the members of the family on the slip of the head of the family).

[10] The proposed statistical slip contains the information necessary to make the tabulations recommended in paragraphs 28 and 31. If a country wishes to make some of the tabulations suggested in paragraph 29, additional questions should be asked on the statistical slip.

III. THE USE OF SAMPLING FOR OBTAINING INTERNATIONAL MIGRATION STATISTICS

1. Review of some Sampling Experiments [1]

The use of sampling in the collection or tabulation of migration statistics is still at an early stage. The following review of experiments with sampling methods in this field will give an idea of some of their possibilities. It is useful to distinguish between special sample surveys and the operation of continuous sampling schemes. Special surveys are conducted on an ad hoc basis in order to elicit information required at a given time to supplement current statistics or check their accuracy. A continuous sampling scheme is intended to be the normal source of a certain kind of statistical information, required periodically and regularly.

i. The Passenger Card Inquiry in Ireland [2]

This scheme originated in 1949 as a trial inquiry on the expenditure of foreign visitors in Ireland and Irish visitors abroad, for the Irish balance of international payments; special questions intended to elicit information bearing on migration were included on the cards used in the investigation. It is considered that the sampling scheme has been reasonably successful and has yielded valuable economic and demographic data at a low cost. It is of interest to note that the traffic of international travellers to and from Ireland is heavy (about two and one-half million each year for a country of three million inhabitants), and that it utilizes all means of transport: rail, omnibuses, cars, foot, transatlantic and cross-channel boats, air. Some details on the scheme follow.

Passenger questionnaire cards are distributed to all passengers on one day in eight (Monday of the first week, Tuesday of the second etc.,); for intermittent services, days are rotated in successive weeks. The cards are anonymous and completed voluntarily. Cards are issued to persons using all types of transport, except, for the time being, those travelling in private cars or on foot. On air services, cards are handled by air hostesses en route. On rail services, special enumerators distribute and collect the cards; they are appointed by the Central Statistical Office and wear armlets indicating their official statistical duties; they are selected by the railway company, mostly among their retired officials experienced in handling passengers tactfully and efficiently; they operate during the journey, on express and slow trains. Enumerators are also posted at the gangways of cross-channel boats; cards are distributed at embarkation and collected at disembarkation. An agreement was made with the authorities of the United Kingdom for the working of the scheme across the Irish Channel and the border. The scheme is now extended to cross-border omnibus routes. Arrangements are contemplated to cover private motor-car traffic: cards will be issued and collected at the frontier centre and filled in while custom formalities proceed. Instead of handing over the cards to enumerators, travellers can send them by mail, free of charge, to the Central Statistical Office at Dublin; very little use is made of this facility.

The person in charge of the cards (enumerator, air hostess) records the number of cards issued; each head of family or individual adult traveller receives one; the collected cards are sent to the Central Statistical Office for sorting and tabulation. The cards for each route are counted and the percentage of effective response is obtained; group percentages by sea, rail and air and the over-all percentage are also calculated, the latter taking into account the small number of responses by mail. The over-all response percentage in 1950 was approximately 35 per cent; over air-routes, it reached 70 per cent for inward journeys; over rail-routes, 45 per cent, over sea-routes 28 to 25 per cent and over omnibus routes 42 per cent; the percentages were in general slightly lower for outward journeys. No complaints from the public have been received; occasional press references to the inquiry have been almost wholly favourable.

The tabulation of the results is now made by punched card machines. Total numbers of arrivals and departures are known independently and the average expenditure obtained from the samples is used in conjunction with these totals to compute the items of the balance of payments, which were the primary purpose of the inquiry. It is possible to compare the efficiency of the different individual enumerators. No information is available on the biases in the sample, arising from erroneous answers to the questions, or from the non-co-operation of a large fraction of the travellers. It was found, however, that the balance of payment data derived from the inquiry agreed well with estimates based on various other methods.

Useful information is obtained from cards on which no expenditure is indicated as well as from cards on which a reply is given to that question. The inquiry sheds light on the nature of population movements affecting Ireland. It has been possible to estimate the number of visitors and of temporary (seasonal) migrants included in the total numbers of arrivals and departures and to rectify the inferences previously drawn from indirect migration data (travel cards and passport statistics), which proved very inadequate.

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[1] This section contains with minor changes and some additions, in particular that of sub-section (v), the description of sampling experiments presented to the Sub-Commission on Statistical Sampling in a working paper (E/CN.3/Sub. 1/26, dated 19 August 1950) prepared by the Secretariat after consultation with the International Labour Office.

[2] Description based on communications from the Central Statistical Office at Dublin to the Secretariat, and on "Statistics of Emigration and Passenger Movements", in the "Irish Trade Journal and Statistical Bulletin", June 1951, particularly section V.

ii. The Passenger Card Inquiries in Canada and the United States[3]

These inquiries are used only to obtain average per capita expenditures abroad, which are applied to the numbers of persons in various categories of arrivals and departures obtained independently on the basis of a complete count made necessary by administrative considerations and immigration regulations. But the inquiries are, nevertheless, closely related to the application of sampling methods to migration statistics since they bear directly on movements of international travellers. Some indications on points which are of interest in connexion with migration statistics are consequently given here.

Both the Canadian and United States schemes involve the collaboration of authorities of different countries: Canada and United States, Mexico and United States. Both schemes are voluntary; the travellers are not compelled to return the card questionnaires. Both are based on anonymous questionnaires, indicating that they have nothing to do with customs enforcement or taxation. The questionnaires can be mailed, free of charge, to the Government Office responsible for their utilization.

The Canadian scheme presents an interesting example of co-ordination between the operations of different administrative authorities. A large number of the travellers enter or leave Canada across the frontier between the Dominion and the United States, using a private motor-car as a means of transportation. The customs form or permit required for the vehicle contains special questions on expenditures and the form (or a copy of the permit) are made available by the National Revenue or Customs authorities to the Dominion Bureau of Statistics.

The schemes take account of persons who cross the frontier by local omnibus or on foot for brief visits.

Different sampling methods are used by the United States administration for overseas travel, for travel to and from Canada and for travel to and from Mexico.

Overseas travellers

Air travel: questionnaires are distributed during the first week of each month.

Sea travel: questionnaires are distributed to all travellers except at New York where they are issued to travellers on selected "representative" vessels, carrying about 25 per cent of the traffic.

Canadian -United States traffic

Air, rail, boat and long distance bus travel: questionnaires are distributed on a random basis, approximately to one adult traveller or family group out of seven. Private motor-cars: questionnaires are part of the form required by the customs authorities for the motor-car, and are distributed to each party. The questions pertaining to expenditures are answered voluntarily by about 75 per cent of the travellers entering Canada.

Mexican-United States traffic

Questionnaires were distributed in 1944 by the Bank of Mexico to tourists visiting Mexico City. Questionnaires have been distributed since 1946 to each Mexican resident entering the United States except border travellers. In 1945 the Bank of Mexico and the United States Department of Commerce co-operated in an investigation on expenditures of border travellers, carried out through a different method (interviews of bankers, exchange dealers, business men, customs officials, merchants and chambers of commerce in border towns) which is not related to migration statistics.

It is of special interest to mention that the biases resulting from non-response have been investigated in the case of United States overseas travel by checks on travellers conducted at the ports through which a significant portion of over-seas traffic passes. The checks consist in brief interviews by a representative of the United States Department of Commerce taking place at the time of the routine immigration inspection so that there is no non-response. Travellers to be interviewed are selected on a random basis. The comparison of results from these checks with those derived from the questionnaires have revealed no important bias in the latter at the time when the checks were made.

iii. Sampling on Travellers to and from France[4]

Investigations regarding the place of residence of alien travellers and on the duration of their stay in France were conducted on the basis of sample of the police control forms filled in by air travellers on arrival in France and departure from that country. The form filled in on arrival by a traveller included in the sample and the form filled in on departure are matched in order to obtain the information required. Sampling enquiries based on the same principles have been conducted at certain sea ports and road frontier posts.

These sampling schemes are reported to have yielded the information desired when they were initiated; but their application required time and care.

iv. The Sample Survey of British Post-War Migration[5]

The survey will constitute the main source of information for the preparation of a book on the social and economic analysis of British migration between 1946 and 1949. It bears on British emigrants leaving for countries outside Europe and the Mediterranean area (long sea routes). It constitutes an example of

[3] Description based on communications from the Canadian Dominion Bureau of Statistics and from the United States Immigration and Naturalization Service to the Secretariat; use has also been made of "The Balance of Payments of the United States, 1946-48" Washington, D.C., 1950, pp, 69-78 and 217-225.

[4] Description based on a communication from the "Institut National de la Statistique et des Etudes économiques", Paris, to the Secretariat.

[5] Description based on a communication from the National Institute of Economic and Social Research, London, to the Secretariat.

the application of sampling methods to the tabulation of migration statistics, while the previous experiments concerned the collection of these data.

The sample survey is based on shipping manifests collected by the Board of Trade. The manifests for 1946-1949 contain particulars of about one million outward passengers, of whom about 600,000 were emigrants of British nationality. The names are generally listed on the manifest in alphabetical order, for each class of travel separately; distinct lists are drawn up for aliens and British nationals. The sample includes every tenth emigrating family-unit of British nationality. The use of variable sampling fractions according to country of destination was considered, but found impracticable because a given manifest often lists emigrants travelling to different countries. The family-unit is defined, for the purpose of inquiry, as consisting of all emigrants with the same surname, the same last address in the United Kingdom, travelling on the same ship and to the same country of destination. It was found that the most frequent "family-unit" was the single emigrant. Passengers are identified as emigrants when the manifest indicates the United Kingdom as country of last permanent residence and a country outside Europe as country of intended permanent residence. Members of the armed forces and merchant seamen are excluded.

All emigrating family-units of British nationality are marked on the manifest. Every tenth is given a serial number. The information required for tabulation is coded according to special nomenclatures established for the purpose of the inquiry.

The sampling procedure was established after a preliminary pilot-survey covering about 2,000 British emigrants to Australia. The pilot-survey made it possible to test the codes, and to investigate the possibility of checking the information from the manifests against the nominal rolls kept by the authorities of Australia for free and assisted passages of British emigrants to that country. It was found subsequently that the quality of the manifests as sources of statistical data varied among shipping companies and consequently was not the same for the different destinations; in consequence, the results of the pilot-survey could not be generalized without precautions.

The number of family-units included in the total sample is 37,500, and the number of individuals just over 60,000. It is considered that the sample is large enough to make it possible to derive reliable information from most of the intended cross-classifications. The taking of the sample by Board of Trade clerks and officials familiar with the manifests, working in collaboration with sociologists expert in problems of migration, has brought to light a number of shortcomings affecting the information available in the manifests, independently of any sampling procedure. One problem of particular interest in connexion with the nomenclature contained in the recommendations of the Population Commission and Statistical Commission concerns the attempt to separate in the survey certain categories of persons who are technically considered as emigrants, but who cannot be regarded as permanent population losses in the demographic and socio-logical sense, such as: government officials appointed to the Colonies or occupied territories; British subjects from the Dominions who return to their home countries after having stayed in the United Kingdom for over a year as student; etc. The Board of Trade has under consideration improvements in the collection of migration statistics and the observations made at the occasion of the sample survey may prove useful in determining the details of the changes to be made in existing documents and procedures.

v. The Sample Surveys in West Bengal on Displaced Persons from Eastern Pakistan[6]

These surveys constitute an example of a detailed special enquiry conducted after the movement of a group has taken place. Between September 1950 and January 1951, the Statistical Bureau of the state of West Bengal, India, undertook, with a staff of over 475 persons, an enquiry on displaced persons having immigrated from Eastern Pakistan, with a view to collecting statistics needed for a relief programme. The enquiry was conducted in three stages, the last two of which utilized sampling techniques. First, a complete enumeration of all refugee families having migrated since 15 October 1946. Secondly, an enquiry designed to provide statistics on the characteristics of the refugees; this enquiry was based, for reasons of economy and expediency, on a 5 per cent sample of the families enumerated in each town and in each police district for the rural areas. Thirdly, information on the sizable movements of refugees having taken place while the survey was being made was obtained from a two-strata sample; police districts and towns, where more than 2,000 displaced families (or 10,000 displaced persons) had been enumerated constituted the first stratum, from which was drawn a random sample of 5 per cent of the agglomerations ("mouzas") for the rural areas, and 5 per cent of the displaced families in the towns; the other places constituted the second stratum, from which a random sample of 10 per cent of the police districts and towns was drawn and, finally, a sub-sample of 1 per cent of the agglomerations ("mouzas") was selected at random for the rural areas, while all displaced families in the sample of towns were visited by the enquirers.

The number of displaced families enumerated was nearly 430,000, and the number of persons 2.3 millions. The sample for enquiries on the characteristics of displaced persons included 20,956 families, of which 18,614 were actually contacted. The results of the enquiry are given in 29 tables, showing the distribution of displaced families or displaced persons by districts of origin and destination, age, sex, marital status, standard of education, dependency, past and present occupation, preferred occupation, amount and source of income before and after displacement, source of income, living accommodation, land ownership in West Bengal, type of Government help received

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[6]Description based on "Report on the Complete Enumeration of Displaced Persons", n.d., and "Report on the Sample Survey for Estimating Socio-Economic Characteristics of Displaced Persons", 1951, issued by the State Statistical Office of West Bengal.

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and required, willingness to return to Eastern Pakistan, etc. The sample for estimating the movement of displaced persons during the course of the survey included 40,808 families of which 37,264 in the first stratum (30,818 urban and 6,446 rural) and 3,544 in the second stratum (3,340 urban and 204 rural). The net decrease of the number of displaced persons was estimated at 37,737 of which 9,233 moved individually and 28,504 in 6,168 whole family groups. Actual movements were much larger than the net balance: for every 1,602 whole families that departed, 1,121 arrived.

2. Observations of the Sub-Commission on Statistical Sampling [7]

Since sampling has not yet been used extensively in [the] field [of migration statistics], experimentation is desirable to determine what methods are best suited to various conditions. It is requested that the Secretary-General report to the Sub-Commission at a later session on the results of any such experiments which may be carried out in any country. [73]

The following remarks refer primarily to the use of sampling methods in the collection of statistics at the time when the travellers cross the frontier. On that occasion the usual frontier formalities could generally be so organized as to permit the identification of travellers in the major categories of arrivals and departures through simple verbal questions; thus it would be possible to obtain at least the totals of the major categories by complete enumeration. A statistical form containing appropriate questions could then be handed to travellers recognized as migrants; in order that no bias be introduced by non-response, administrative methods can be devised to ensure the return of all statistical forms by migrants. In many circumstances, however, it is not possible to identify the major categories without considerable extra expense, inconvenience to the travellers and additional work for the personnel engaged in frontier control. In that case, it may be possible to devise sampling methods which, without excessive expense or inconvenience, will yield the totals of the major categories and the desired data on characteristics of migrants. Experimentation with such methods is particularly desirable in countries where the existing methods provide statistics on only certain types of migrants, such as aliens, nationals, or persons subject to military obligations, or where migration statistics are obtained only from population registers. By the application of sampling methods at the occasion of frontier control, it may be possible for such countries to obtain comprehensive, internationally comparable statistics at a reasonable cost and without causing excessive inconvenience to travellers. [74]

Even in those countries where the total numbers of arrivals and departures in the various major categories are obtained by complete enumeration, it may be desirable to use sampling methods in collecting the desired statistics on characteristics of migrants. Sampling for characteristics might be advantageously used on occasions when large numbers of migrants arrive or depart through the same frontier post on the same day (e.g., arrival of a ship carrying many immigrants). In many such countries, however, this application of sampling may not be advantageous under ordinary conditions; since the migrants ordinarily represent only a small proportion of all travellers, their number may be small enough, under most conditions, to permit complete enumeration of their characteristics with little expense or difficulty. [75]

Three kinds of sampling plans can be considered for obtaining data on the total numbers of arrivals and departures in various major categories and of the characteristics of migrants:

(a) Collection of data from one traveller (or migrant) selected at random out of every n travellers (or migrants);

(b) Collection of data from all travellers (or migrants) at suitable intervals of time, for example, on every eighth day or thirteenth day, etc., with equivalent rates of selection in the case of non-daily transport services;

(c) Collection of data from all travellers (or migrants) arriving or departing in certain ships, airplanes, railway trains, buses, motorcars, and other conveyances, selected so as to constitute a properly designed sample of conveyances.

These methods can be combined; for example, samples might be taken on certain days or in certain conveyances, comprising a certain fraction of persons travelling on those days or in those conveyances. [76]

If the method used is to collect data from every nth traveller (or migrant) there should be an easy, automatic way of selecting the travellers at the specified intervals. One possible method which could be tested is to give each traveller, at an early stage of the journey across the frontier, a card taken from a package in which a distinctive mark would have been placed, in advance, on every nth card. Thus the travellers bearing the distinctively marked cards could subsequently be required, at the frontier post, to give the information needed for statistical purposes. A variation of this method, which might be effective under some conditions, is to make the identifying card itself bear the questions for statistical purposes, which would not appear on the cards given to travellers not selected for the sample. The latter variation might

[7] This section reproduces the operative part (paragraphs 73-81) of Chapter VIII "Statistics on international migrants and travellers" of the Report of the Fourth Session of the Sub-Commission on Statistical Sampling (E/CN.3/114, dated 28 September 1950), formally received by the Statistical Commission at its sixth session (E/1994, paragraph 68). The text of the Sub-Commission was found to be completely consistent with the revised recommendations on migration statistics adopted in 1953 by the Population Commission and the Statistical Commission. A small number of footnotes referring to these recommendations have been added; in the last paragraphs, references to now absolete interim documents have been brought up to date. The number of each paragraph in the original report is given in square brackets at the end of the text.

be especially effective where some card (e.g., a landing card) must be filled out in any case by all travellers; then the cards given to those selected for the sample could merely bear more questions than the others. By any of these methods it might be possible, under certain conditions, to expedite operations at the frontier post by forming one or more special queues of the travellers selected for the sample, so that they could answer the special questions, fill out the statistical forms, or have their filled-out forms inspected, while the other travellers go through the usual formalities. [77]

The methods of collecting data from all travellers (or migrants) at selected intervals of time or in selected conveyances have the disadvantage that, for a given number of travellers or migrants, they produce estimates with increased sampling variance resulting from variations between days or conveyances. On the other hand, they may, under some circumstances, involve fewer administrative difficulties. Experimental surveys may give some indication of the loss of efficiency resulting from the use of these methods.[78]

The Sub-Commission stresses the importance of applying, in any experiments with sampling for the collection of statistics on migrants and travellers, the general principles that are valid in any sampling work, in particular the following:

(a) The selection of elements in the sample should be effectively random, since the selection of elements that are considered a priori as "representative" introduces unknowable biases.

(b) Schemes providing for voluntary response are hazardous: if many persons fail to respond, the results may be seriously biased.

(c) If the travellers or migrants included in the sample are asked to fill out special statistical forms, they should be given ample time to do so, and the forms should be collected before they leave the frontier post.

(d) If, for any reason, there are considerable numbers of persons who do not respond, the resulting biases should be investigated from time to time, for example by obtaining data from small numbers of travellers at various frontier posts in such a way that there can be no non-response. [79]

The Sub-Commission calls attention to the advantages of collaboration between the authorities of neighbouring countries in the operation of any sampling experiments which may be undertaken in this field, and notes the suggestion concerning regional arrangements made by the Statistical Commission and by the Population Commission.[8] Such collaboration would be helpful in improving the comparability of results obtained in the countries concerned and might make it possible to achieve substantial reductions in cost. Regional arrangements may prove easier to achieve if they bear on the application of sampling schemes, which are by nature purely statistical, than if they were to embrace the operations of administrative frontier control applied to all travellers. It may in particular prove advantageous to have statistical forms distributed to travellers by the authorities of the country of departure and collected by the authorities of the country of arrival, due care being taken to formulate the question so as to provide the statistics desired by both countries. [80]

Where data on the total numbers in various categories of arrivals and departures, or on the characteristics of migrants, are obtained by complete enumeration, it may nevertheless be useful to apply sampling methods in tabulating the results. The use of sampling in tabulations on these subjects could follow fairly well standardized methods and would offer several special advantages:

(a) It may prove easier for the agency responsible for the statistical tabulations to get access to a sample of the documents used by the agencies controlling the arrivals and departures of international travellers, or a sample of the population registers or other records, than to survey the entire materials. Care should be taken that such sample is selected so as to be unbiased.

(b) Sampling makes it possible to obtain tabulations of which the cost would be prohibitive if they were carried out on the basis of complete enumeration. This should facilitate the improvement of the international comparability of the statistics in question, which are regarded as being gravely defective in this respect as well as from the point of view of coverage.[9] [81]

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[8] Cf. chapter II, Recommendations adopted by the Population Commission and the Statistical Commission, paragraphs 12 and 14.

[9] Cf. Report on the Third Session of the Population Commission (E/805), paragraph 12(1).

APPENDIX

Selected Bibliography

International Labour Office: "Statistics of Migration: Definitions, Methods, Classifications", Studies and Reports, Series N (Statistics), No. 18, Geneva, 1932.

United Nations: "Problems of Migration Statistics", Population Studies, No. 5, Sales No. 1950. XIII.1, Lake Success, 1949.

Ferenczi, Imre (Willcox, Walter F. editor) "International Migrations", vol.1 "Statistics", prepared on behalf of the International Labour Office and published by the National Bureau of Economic Research, New York, 1929.

Lacroix, Max: "Problems of Collection and Comparison of Migration Statistics", in "Problems in the Collection and Comparability of International Statistics", Milbank Memorial Fund, New York, 1949.