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REPORT OF THE EXPERT GROUP ON INTERNATIONAL TRAVEL STATISTICS

Note by the Secretariat. The Expert Group on International Travel Statistics was convened by the Secretary-General in Geneva from 26 to 30 June 1967, pursuant to operative paragraph 3 of Economic and Social Council resolution 1109 (XL) which requested the Statistical Commission

"to study, in co-operative with the United Nations Conference on Trade and Development and the International Union of Official Travel Organizations, the methods and, taking into consideration the proposals made by the Conference /on International Travel and Tourism, Rome, 1963/, the definitions most suitable for the purpose of improving statistics on tourism without increasing tourist formalities, and to submit its recommendations to the Council at its summer session in 1968".

In the light of an earlier decision by the Statistical Commission, it was considered that the most appropriate way for the Commission to study this subject, which it would be examining for the first time, $\frac{1}{}$ would be for the Secretary-General to appoint a small group of experts, drawn from developed and developing countries in different regions, who were familiar with the problems involved in the collection of international travel statistics.

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^{1/} At its thirteenth session (1965) the Statistical Commission, taking note of the definition of a visitor proposed by the United Nations Conference on International Travel and Tourism (Rome, 1963), requested the Secretary-General "to prepare for review by the Commission a study of methods and definitions suitable for use in the field of international travel statistics with a view to enabling the Commission to make recommendations for the improvement of statistics in this field" (E/4045, para. 47).

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The Group was composed of seven experts serving in an individual capacity, who were designated by the Secretary-General. The Group was convened in co-operation with the United Nations Conference on Trade and Development (UNCTAD) and the International Union of Official Travel Organizations (IUOTO) and at the invitation of the Secretary-General observers from the IMF, IBRD and OECD also participated. The Group held nine meetings from 26 to 30 June 1967 under the chairmanship of the Director of the Statistical Office of the United Nations, and on 30 June 1967 adopted the attached report.

^{2/} For a list of participants, see the annex to this report.

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I. INTRODUCTION

- 1. In the first place, the Expert Group wishes to stress that rapid economic and social progress and the process of industrialization and urbanization, together with improvements in transport, have brought about radical changes in the traditional attitudes of people towards travel. The magnitude of these changes has not yet been fully recognized by all responsible authorities, either at the national or the international level. Thinking in this field still lags behind facts. Furthermore, in view of the increasing importance of travel in the economies of countries and the difficulties encountered in measuring travel and its consequences, it is indispensable to take account of this activity in establishing demographic, economic, social and financial statistics. The Expert Group, therefore, considers that co-ordination of statistical work in these various fields should take into account the growing and urgent needs of the various users of travel statistics at the national and international level.
- 2. Given the limited time available, the Group decided to confine its deliberations to the number of visitors, their length of stay (visitor-nights) and their expenditure. A systematic coverage of various fields of information (e.g., hotels and similar establishments, frontier crossings, international carriers, financial institutions and departments of government) is necessary if comprehensive information on international travel and expenditure thereon is to be collected. In particular, the following three fields of investigation need to be covered:
 - (a) Frontier crossings;
 - (b) Accommodation;
- (c) Households or individuals (with regard to the travel of residents). In order to delineate these various fields, certain terms in common use should be given a uniform interpretation: "visitor", "traveller", "visit", "stay", "frontier crossing", "means of accommodation", "night spent", "travel expenditure" etc. For this reason, the Group considered that a glossary in the principal languages, covering these and other terms in the field of travel statistics, should be compiled at the international level.

- 3. The use of two distinct units of measurement is recommended the visitor-night and the individual visit. A system of classification is proposed for each, with the object of classifying units into classes of differing economic significance for the tourist industry. These classifications should be regarded as the minimum necessary to provide a basic system of statistical information for national use which will be reasonably comparable internationally. Many countries will need to provide for additional items to meet specific national requirements.
- 4. It will be noted that the Economic and Social Council was particularly concerned that there should be no increase in tourist formalities; this aspect has been given full weight in the Group's proposals. Passengers should not be compelled to undergo any formalities just to provide statistics, nor should compulsory documentation be maintained or extended purely for this purpose.
- 5. The requirements of the developing countries have been kept closely in mind in these recommendations. While the tourist trades are important and growing in a number of countries, they may be of especial importance to developing countries. It is the developing countries which are most lacking in the basic information necessary for planning in the travel sector, where many have special natural advantages. At the same time, the needs of international comparability have also been kept in mind.

II. DEFINITIONS AND COVERAGE

Visitors

6. The Group agreed that the subject of its study should be the visitor from abroad. It recommended the use by all countries of the definition of visitor proposed by the United Nations Conference on International Travel and Tourism (Rome, 1963):

"For statistical purposes, the term 'visitor' describes any person visiting a country other than that in which he has his usual place of residence, for any reason other than following an occupation remunerated from within the country visited" (E/CONF.47/18, p. 5).

7. The Rome Conference had also suggested that visitors as defined above should be classified into two categories consisting of tourists on the one hand and

excursionists on the other. The Group considered that it would be preferable to distinguish within the definition of visitor a separate class of visitors who might be described as "day visitors" or "excursionists" defined as consisting of visitors on day excursions and other border-crossers for purposes other than employment, cruise passengers, and visitors in transit who do not stay overnight in accommodation provided within the country. The special characteristic of this category of visitor, distinguishing it from the main class of visitor, is that there is no overnight stay.

- 8. The classification of international travellers as a whole is dealt with in paragraphs 31-34 below, but it may be noted here that the inward movement of travellers as a whole covers: 3/
 - 1. Permanent immigrants (i.e., non-residents (nationals and aliens) intending to remain for a period exceeding one year);
 - 2. Temporary immigrants (i.e., non-residents intending to exercise for a period of one year or less an occupation remunerated from within the country);
 - 2a. Dependants of temporary immigrants; 4/
 - 3. <u>Visitors</u> (as defined in paragraph 6);
 - 4. Residents (nationals and aliens) returning after a stay abroad not exceeding one year;
 - 5. Foreign diplomatic and military personnel stationed in the country. 5/
- 9. Only in household surveys is it possible to distinguish the different trips made by the same visitor. Elsewhere, each frontier crossing by the same person in the course of a single trip is counted as a separate visit. Except in household surveys, therefore, visitors are equated to visits. In frontier statistics, each returning visitor is counted once on each trip as he leaves and once as he re-enters his country of residence; in other countries, he may be counted twice each time he arrives at the border, because the point of entry for one country is often the point of exit for another.

^{3/} Cf. International Migration Statistics, Statistical Papers, Series M, No. 20 (United Nations publication, Sales No.: 53.XVII.10), pp. 15-17.

^{4/} Dependants of temporary immigrants were in the 1953 United Nations recommendations included with visitors; it is here proposed that they should, like all other travellers, normally be attributed to the category to which the head of the family belongs.

^{5/} This group was not covered by the 1953 recommendations on migration statistics and constitutes a particular category of non-residents.

- 10. The number of visits derived from "hotel" registrations represents the number of new arrivals at each hotel stayed in. (The term "hotel" is used throughout this study to cover all the forms of paid accommodation mentioned in paragraph 26, where the subject of hotel statistics is discussed in more detail). A subsidiary set of data is also recommended, in the form of a record of the number of visitors registering each month for the first time in the country's "hotels" during their visit (i.e., free of duplication).
- 11. The treatment of migrants is a separate problem, upon which the United Nations Population and Statistical Commissions reported in 1953.6/ For frontier statistics, it is recommended that there be distinguished, as separate groups, both the migrants and those coming to paid employment, and (unlike the 1953 recommendations) their families. In most countries, persons in these groups are subject to special administrative arrangements, designed for purposes of control, which can be used to provide data on their numbers and characteristics. The allocation and analysis of these data is not discussed here, since these questions are appropriate to the field of demographic rather than travel statistics. The persons are absorbed into the national economy of the receiving country (that is, they become residents) and cease to be of interest from the point of view of travel statistics. If and when they return to their country of origin, the reverse process takes place. During their movement between countries, however, they are the subject of travel statistics from the point of view of the international carriers and, therefore, no attempt need be made to distinguish these groups in the transportation account of the balance of payments. The same may be true for hotel registrations, where such "visitors" cannot easily be distinguished; in any case, at that stage they are for the most part no different from "visitors" strictly defined.

Travel receipts and expenditure

12. The individuals whose expenditures comprise the travel account in statements compiled in accordance with the International Monetary Fund's <u>Balance of Payments Manual</u> (third edition, 1961) are, by and large, the same persons who are defined as "residents" and "visitors" in paragraphs 6-8 above. Although such conceptual

^{6/} International Migration Statistics.

differences in coverage as do exist are for the most part of little practical significance for the compilation of statistics, it would none the less be worth considering whether it would be feasible to eliminate them when the next revision of the <u>Manual</u> is prepared. In addition, there are at present some areas of uncertainty in the balance-of-payments figures relating to travel.

(a) Treatment of goods bought

13. The Group recommended that, where known, all expenditure by visitors as defined in paragraph 6 (including, therefore, border purchases by shoppers and shore purchases of cruise passengers) should be included in the travel account in the balance of payments, except in the case of a purchase made by a business visitor in connexion with his business, if such purchases can be distinguished. (In such cases the visit is incidental to the purchase than than the purchase to the visit). It is understood that this was the general intention of the IMF Manual, though there appeared to be some ambiguity on this score (cf. paragraphs 152(d) and 245 of the Manual). Furthermore, the Group recommended that where the order of magnitude of border shopping and purchases by cruise passengers could be ascertained (e.g., through occasional sample inquiries) and was of sizable importance, the amounts involved (and included in the total of travel expenditure) should be separately indicated.

(b) Fare payments

- 14. The problem of the treatment of international fares has been accentuated by the growth of "inclusive tours", in which travellers are not always able to distinguish separately the principal components of their travel expenditures:
 - 1. Cost of fare paid to national carrier;
 - 2. Cost of fare paid to foreign carriers:
 - (a) For international transportation;
 - (b) For transportation within the countries visited;
 - 3. Payments abroad by travel agent for accommodations and other services;
 - 4. Agents commissions:
 - (a) Earned from foreign carriers, hotels etc.;
 - (b) Earned from traveller;
 - 5. Traveller's own disbursements abroad.

The traveller knows only the total of items 1-4 (not the individual components), and he knows item 5. For international travel payments, items 1 and 4(b) are not relevant, since they are transactions between residents of the same country. Item 2(a) should be kept separate, and in the balance of payments it is appropriate to the transportation rather than the travel account. Item 4(a), in so far as it applies to commissions on fares, should be entered as a credit in the transportation account of the balance of payments, where it partly offsets the traveller's expenditure (debit) in item 2(a). Similarly, commissions on hotel rooms etc. should be entered as a credit under miscellaneous services. The traveller himself, however, can hardly be expected to make these distinctions or to provide separate information about the amounts involved.

In spite of this difficulty, a number of countries are able to segregate international fare payments from other travel expenditures. When this is not possible, the Manual provides for including fares in the travel account. It should be noted, however, that when fare payments by residents to national carriers are included with travel debits, a corresponding credit entry for such payments should be included in the transportation account; this will offset the wrong inclusion in the travel account of a transaction between residents. This alternative treatment is of some practical importance, since some countries find it possible to estimate only the total travel expenditures of residents (including fares paid to national carriers) and the total fares collected by national carriers (including those earned from residents). The net expenditures of residents on travel can then be correctly entered in the balance of payments, although the gross credits and debits will be overstated by equal amounts. 16. The Group recommended that, whenever possible, fare payments be separated from other travel expenditures, and that fare payments by residents to national carriers be eliminated from the figures rather than being entered twice on an offsetting basis. Likewise, fare receipts by national carriers from foreigners should be kept separate from other types of earnings from travel.

(c) Separation of passenger fares for travel between third countries

17. From a travel point of view, it would be useful if the amount of passenger fares attributable to visitors to the compiling country could be separated from

the total of passenger fares attributable to non-residents carried between third countries ("cross trades" or "fifth freedom traffic"). The economic consequences of these two kinds of traffic are different and the development of data of this kind is essential for measuring the total income accruing to the travel trades in different countries. However, they cannot be obtained unless the statistics compiled by national carriers distinguish residents of the country from non-residents for each route.

III. METHODS OF MEASURING VISITORS, VISITOR-NIGHTS AND EXPENDITURE Visitors and visitor-nights

18. Traditionally interest has focused on the number of visitors entering each country (or, in practice, the number of visits), but since this figure has limited significance by itself, this approach has frequently been accompanied by efforts to obtain estimates of the average length of stay - a parameter which has been observed to vary with class of visitor and country of residence. 19. The Group noted that at present most countries attempted to measure the number of visitors either by a complete or a sample count at points of entry or exit, which gave the number of arrivals and departures, or by using registrations at hotels and other paid accommodation, which gave the number of arrivals at each "hotel" and an aggregate number of visitor-nights spent therein. Neither series yielded optimum results; arrivals or departures at frontiers needed to be complemented by knowledge of the length of stay of visitors (and its frequency distribution), but had the advantage of covering the totality of visitors. "Hotel" and similar registrations, on the other hand, while (through the proposal in paragraph 28 below) they could provide knowledge of the number and of the length of stay of visitors in these establishments, could not account for visitors in private homes and some other non-commercial or unregistered accommodations, which in many countries constituted a significant part of the total. The characteristics of such visitors could differ markedly from those staying in hotels. Hence it would be necessary to complement both methods by sample inquiries, the more so since it was to be expected that frontier formalities would be progressively reduced.

20. The Group unanimously considered that it was economically more meaningful to classify visitors by country of residence rather than of nationality. With regard to hotel returns, it was considered that this should not create any real difficulty since the visitor's permanent address was indicated. For frontier and other statistics based on a visitor's passport, there could be greater difficulty, since frontier control officials, for example, were interested only in nationality, and it was noted that current practice was by no means uniform among countries. The Group recommended that wherever possible a classification by country of residence should be sought and that this criterion, rather than that of nationality, should in any case be employed where sample surveys of visitors were undertaken.

Expenditure

(1) the direct method (asking the visitors themselves); (2) the indirect method (multiplying the number of visitor-nights by an estimated figure of daily expenditure per visitor), and (3) the central-bank method (obtaining figures through the banking system). All three methods are in current use - indeed some

21. There are three general methods of estimating travel credits and debits:

- countries publish figures obtained by two different methods.

 22. In view of the large number of visitors involved in most countries, the
- direct method necessarily involves sampling and is subject to the risk of bias in the answers to so personal a question.
- 23. The indirect method is subject to the difficulty of obtaining an appropriate average figure of daily expenditure per visitor. Since short-staying business visitors spend heavily compared, for example, with long-staying students on vacation, the applicability of an average figure representative of all classes of visitor is doubtful. The composition of incoming visitors can change very rapidly over time, and new income groups are periodically added to the flow. It then becomes necessary to supplement the indirect method by other information, obtained by questioning a sample of visitors.
- 24. The central-bank method is most commonly employed for estimating expenditure. Even with exchange controls, this method suffers from a number of limitations, because travel expenditure tends to be "netted", the currency required for outgoing visitors being provided from foreign exchange obtained from incoming visitors.

Furthermore, the assignment of the accounts cannot always be made accurately: transactions in real estate or in stock exchange securities may be attributed to tourism and some encashments of foreign money by visitors find their way to the black market rather than to the banking system.

25. The difficulties encountered with these three different sources of information are extensively discussed in the literature. 7

IV. RECOMMENDATIONS ON METHODS OF OBTAINING TRAVEL STATISTICS

1. Statistics obtained from hotels and other paid accommodation

- 26. These statistics are based on information collected and compiled from registrations at listed hotels and other paid accommodation. They are an important part of the system of travel statistics and provide data on the hotel industry's contribution to the national product. While many countries require such statistics, the extent of their coverage of all kinds of accommodation used by foreign visitors varies greatly. It is essential, however, that the statistics should cover all types of paid accommodation, including pensions, boarding-houses, camping sites and holiday villages, the latter two being of growing importance in certain countries.
- 27. The Group fully recognized that regular statistical returns from such establishments depended on the co-operation of the hotel trade, which it was confident would be forthcoming, since better knowledge of occupancy rates and other hotel statistics could not fail to be of benefit to the travel trade as a whole as well as to Governments. In many cases the returns might call for an extension of existing systems of hotel registration and licensing, so as to cover other types of paid accommodation. In general, since these returns depend on the owners of the various types of accommodations, they must agree to furnish accurate information and refrain from falsifying the returns for tax or other purposes. A law on statistical confidentiality would facilitate these matters.

^{7/} See, in particular, L.J. Lickorish, <u>Tourism and the International Balance</u> of Payments (Geneva, International Institute of Scientific Travel Research, 1953).

28. The data to be collected from visitors and residents on registration at the hotel, camping site etc. should be restricted to:

Name			
accompanied by wife and family members aged 16 or over*			
and children (under 16)*			
Permanent address in country of residence			
Is this your first hotel etc., registration during this			
visit to /this country/? **			
Yes No			

These statistics could also, where appropriate, be classified according to the category and grade of the hotel etc. (information which could be derived from its grading, name and address) and other criteria. The data could be related to the appropriate figures of normal capacity so as to obtain occupancy rates. For those countries needing it, information would also be available from the registration forms on the number of arrivals from abroad at all hotels etc. in the country (i.e., those who answered "yes" to the last question) and on the length of stay of these visitors, classified as appropriate.

^{*} This item may also be adapted for group registrations.

^{**} To be completed by non-residents only.

^{29.} By means of these standard questions, a periodic (monthly, seasonal etc.) report could be prepared $\frac{8}{}$ showing:

⁽a) The number of arrivals at the hotel according to the principal countries of residence (or groups of countries if required);

⁽b) The number of nights spent in the hotel in the reporting period, classified according to the principal countries of residence (or groups of countries, if required).

^{8/} A manual of definitions should be prepared.

50. It is generally true that the earlier the stage of development of a country the more the visitors are concentrated in hotels. At the same time, it is important that the benefits accruing to countries with a history of emigration (from the visits of ex-emigrants to their mother countries) should not be overlooked. Such ex-emigrants may not stay in hotels or other paid accommodation and, to this extent, they will be excluded from travel statistics entirely dependent on hotel sources, which need, therefore, to be supplemented by some frontier statistics. The low expenditure per day of ex-emigrants is at least partly offset by a longer stay. The particular economic advantages of such visits are the low or negligible capital cost of providing accommodation and the low import content of their purchases. Visitors from cruise ships and other day visitors can also make a large contribution to the economy relative to cost, and should be separately distinguished where possible.

2. Statistics obtained at the frontier

- 31. Statistics of "frontier crossings", including arrivals from abroad at air and sea ports, are available for most countries of the world. But with the growth of international traffic and the general pressure to simplify and reduce formalities, the old-fashioned documentation of passengers by "visas" and other arrival and departure forms is increasingly inappropriate.
- 32. Neither the re-introduction of frontier and port formalities, once these have lapsed, nor substantial additions to existing forms can be justified solely on statistical grounds. But for those countries still using such forms (either for all visitors or for a sample of visitors) the following is the minimum information needed for a simple classification of visitors:

A. All travellers (incoming and outgoing)

- 1. Name and sex (this information not required for statistical purposes).
- 2. Whether accompanied by: (a) wife; (b) family members aged 16 and over (number); (c) children under 16 (number). The number of "family members" and children under 16 may also apply to travellers in charge of groups.

B. Outgoing travellers

If residents of the country

- 1. Principal country to be visited
- 2. Main purpose of proposed visit: migration; employment; holiday; business; other (specify)

If visitors to the country

- 1. Country of present residence
- 2. Main purpose of visit: employment; holiday; business; other (specify)
- 3. Length of stay in this country (days; zero if no overnight stay)

C. Incoming travellers

If residents returning from abroad

- 1. Principal country visited
- 2. Main purpose of visit: employment; holiday; business; other (specify)
- 3. Length of stay abroad (days; zero if no overnight stay)

If visitors to the country or immigrants

- 1. Country of present residence
- 2. Main purpose of visit: migration; employment; holiday; business; other (specify)
- 33. By means of these standard questions, periodic figures classified by means of transport used could be provided (because this information would be automatically available according to the collection point: airport, seaport, rail or road frontier post) on visitors departing, classified by country of residence, and on residents returning home, by principal country visited, both groups being analysed by purpose of visit and length of stay (classified as appropriate). Less complete information (e.g., without length of stay) could be assembled for visitors arriving and for residents departing.
- 34. Supplementary information about expenditure, area visited, type of accommodation used, age distribution of visitors etc., should be obtained by random interviews at the point of departure a method which will increasingly have to be employed to obtain the information on the "pro forma" above where a complete count is not practical (see paragraphs 41-47 below).

3. Statistics obtained from households

35. Household surveys are a method of obtaining information about the holiday habits of local residents, which it was suggested in paragraph 2 should be a third field of investigation. They are usually limited to holidays because this is not an efficient method of inquiry about student or business trips, but the word "holiday" is sometimes broadly interpreted to include visits to friends and relations or for health reasons. The inquiry about holiday visits abroad is usually ancillary to the inquiry about the more numerous holidays taken within the national frontier. These inquiries measure outward "travel" (i.e., debits) only, and can therefore provide information on travel credits only to the extent that other countries also adopt "household surveys", and even then only for the principal destinations that the surveys are likely to distinguish. Household surveys are discussed in more detail in paragraphs 49-52 but few standard proposals are made. Although such surveys are a useful source of supplementary information (for example, on travel propensities), their value in measuring international travel is limited to a relatively few developed countries.

4. Postal and other written questionnaires

36. A number of countries use postal and other written questionnaires, often pre-coded and anonymous, to obtain information from travellers, and in some countries these are issued to all visitors on or before arrival. Such surveys are seriously affected by the rate of non-response: the nationals of some countries tend by tradition to be very forthcoming in such matters, while others tend to be less responsive. The proportion of non-respondents may often be large enough to invalidate the results, where a complete count is involved, or to destroy the random nature of the survey where a sample has been selected. This difficulty is not overcome by the sheer bulk of completed questionnaires. It is usually difficult to persuade a high proportion of visitors to hand over completed questionnaires before they leave the country, or post them on return to their domicile. If the questionnaire is in the mother tongue and the idiom of the passenger, a response is more likely. The inclusion of questions on expenditure is likely to exaggerate the variability of national responses, and such questions are better asked orally. In this way there is more confidentiality:

the respondent feels less committed to evidence which might be embarrassing to him in the hands of certain authorities. Furthermore, in an oral interview it is possible to probe what items of expenditure have been included or excluded and whether or not expenses of other members of the family are included.

5. Techniques of sampling for travel statistics

- 37. A detailed and comprehensive system of travel statistics can seldom be obtained by the method of exhaustive count, and sample surveys are often indispensable to supplement available information. The organization of such surveys, however, implies some quantitative information, however rough, concerning the fields to be covered (see paragraph 2). An exhaustive treatment of existing sampling techniques would be beyond the scope of this report, and various specialized documents on the subject are available, such as the Handbook of Household Surveys: A Practical Guide for Inquiries on Levels of Living. However, there does not yet exist any practical manual on sample surveys in the field of travel and it would therefore be useful to compile as complete as possible a report on methods which are now being experimented with. The following paragraphs put forward some general guidelines.
- 38. In order to meet the needs of users, the sample surveys might give breakdowns according to such criteria as:
 - 1. Age and sex of traveller;
 - 2. Place and country of residence;
 - 3. Socio-cccupational, or income, group;
 - 4. Purpose of travel;
 - 5. Length of stay;
 - 6. Means of transport used;
 - 7. Type of accommodation used;
 - 8. Expenditure in the country visited;
 - 9. Period (month) of visit;
 - 10. Type of resort visited (seaside, mountain, countryside, spas etc.).

Studies in Methods, Series F, No. 10. (Joint United Nations/ILO/FAO/UNESCO/WHO publication, Sales No.: 64.XVII.13), chapter IX, "Conducting the household survey".

(a) Sampling of visitors at hotels and other paid accommodation

- 39. Hotel registration is a method of recording hotel nights, for which a complete count is usually needed. But for other information which it is not practicable to ask on a hotel registration form such as expenditure in the country, purpose of visit, or means of transport used the hotel registration system provides an excellent sampling frame. Sampling supplements information obtained from the hotel forms; it is not an alternative to it, as sampling at the frontier is to frontier documentation.
- 40. In sampling hotels and other paid accommodation, it is necessary to ensure that a stay in mid-week, or at the weekend, in season and out of season, in each type of hotel and in each type of region, has a chance of being included in the sample in proportion to its occurrence in the universe constituted by the sum total of such accommodation in the country, which for a variety of reasons may be only imperfectly known. If every visitor staying in the chosen hotel on the chosen night is not included in the sample, the choice of contact must be entirely random; if a quota of each nationality or country of residence is applied, based on the national distribution, a misleading result can be obtained. The total number of units in the sample must be determined in relation to the acceptable level of sampling error.

(b) Sampling at frontiers

41. The sheer volume and growth of international travel - it is estimated that some thousand million entries into and exits from individual countries are made each year - makes the task of complete documentation of most frontier crossings an unmanageable operation. Sampling methods are therefore resorted to in a number of countries. The characteristics of travellers vary tremendously according to the purpose of the visit, means of transport used, the season of the year, the day of the week, and even the hour of the day. It is, therefore, imperative to ensure that the sample is fully representative of the composition of the total traffic which it is intended to investigate. The total number of maritime, air, road and rail points of entry covered by the survey must be determined in relation to the acceptable level of sampling error. Since traffic flows in clusters of visitors of varying sizes and composition, the sampling frame may be constituted

either by the clusters, or by the visitors, depending on the characteristics to be studied. Moreover, different kinds of transport require different sampling methods. But it must be emphasized that for most purposes it is much simpler to use the individual visitor as the primary sampling unit, even if this involves certain attributes of the cluster, such as purpose of visit or the amount of expenditure, being applied to the individual selected.

- 42. (i) Sampling at ports. The number of ships and of passengers expected to embark or disembark can be roughly estimated in advance from information available to the shipping companies and the port authorities, so that the sampling fraction can be calculated. The balance between sampling the passengers on each of "n" ships and sampling every "nth" passenger on all ships arriving or departing must depend on cost, the variability of the traffic, and the level of sampling error that can be regarded as permissible.
- 43. Travel by sea offers the greatest opportunities for measuring arrivals and departures, because of the greater time available for interview and generally calmer atmosphere. It is possible to exercise fairly strict control at embarkation and even disembarkation. On short journeys, interviewers can travel with the passengers, while on long journeys it is generally possible (at least in Government-sponsored surveys) for interviewers to board the ship before disembarkation of passengers, or leave the ship after embarkation is completed. If the information is sought not by interview but by questions on an embarkation or disembarkation card, it is possible to ensure that those to whom the cards have been given complete them, thereby ensuring that there is an adequate response. In all cases, it is necessary to obtain a random selection of passengers.
- 44. (ii) Sampling at airports. Air travel used to be ideally suited to sampling. Passengers arrived and departed in small groups, passed through particular channels which made a count easy and were then firmly anchored in their seats so that air hostesses could seek information from them at will. This is no longer so. The speed with which increasingly larger numbers of passengers and their luggage are handled on arrival and departure has reduced delays to a minimum, and any impediment to their free flow is justly resented by the passengers, the airlines and the airport authorities alike. With the increasing speed of aircraft, the actual flying time and the time which air hostesses have available for the distribution and collection of forms is greatly reduced. Even the weight of the forms to be carried is a consideration.

45. Different aircraft loads have different characteristics, depending on the time of arrival or departure, origin or destination, flag of the carrier etc. Although the idea of introducing standard international forms for air travellers is superficially attractive, this is probably not the best way of getting the information, which can be more economically obtained from a stratified sample of airline traffic on the ground. This must be obtained at a point through which all passengers have to pass - and not just those who use airport coaches to or from the town terminal, who form a biased section of the whole. Total air traffic statistics needed for the sample frame are obtainable from both the airlines and the air transport authorities.

46. (iii) Sampling of road traffic. Sampling of arrivals and departures by road

- is more difficult than by sea. There are usually many more points of entry at land frontiers and the time available for obtaining written or oral answers to questions is very limited, but with the exercise of ingenuity sampling is not impossible. Electronic counters can be used to measure the volume and frequency of road traffic; the sample can be stratified by carrying capacity of the vehicle and country of registration and passengers can be interviewed at predetermined intervals by techniques which are commonly used for traffic censuses or road tolls. 47. (iv) Sampling of railway traffic. Traffic on trains can be sampled at random by ensuring that each passenger crossing the border by this means has an equal chance of being interviewed. This means that local trains must be covered as well as the international expresses, in proportion to the traffic they handle. First- and second-class passengers should not be sampled separately (e.g., taking one first-class carriage and one second-class carriage) unless they are treated separately throughout and the results properly weighted by reliable traffic
- 48. Some allowance needs to be made for those crossing frontiers by foot and bicycle. This traffic is not likely to be responsible for a major contribution to travel income or expenditure, so that simple and rough methods of measurement are sufficient.

figures for each class. Statistics of the total traffic carried by the trains

can normally be obtained from the railway authorities.

(c) Household surveys

- 49. Household surveys have been effectively used in many economically advanced countries, such as Denmark, Federal Republic of Germany, France, Netherlands, United Kingdom. They have one notable advantage, in that they provide an economical method of collecting information and relating the different visits to the characteristics of the visitor. The other principal sources of travel statistics start off, at any rate, by treating each visit as the independent variable. On the other hand, the division between different means of travel is cumbersome in the household surveys, and expenditure on foreign travel not easily obtained by this method.
- 50. The construction of sampling frames for household surveys cannot be standardized for countries with very different social conditions. Suffice it to say that, as travel is a very variable characteristic, a fully representative sample is a prerequisite for results of any value. In some surveys, questions are asked of informants who are chosen by the interviewer so as to complete a predetermined quota based on the known distribution of the population in regard to sex, age, socio-economic status or other characteristics. The results are obtained inexpensively, but have been found to be of uncertain reliability, since they are not based on random selection. A random sample, on the other hand, is both more expensive and more difficult to achieve. Population registers are not always available, or are limited to electoral rolls, or the lists are of hereditaments for census data brought up to date: in one way or another, allowance has to be made for people not on the original list, so as to ensure a completely random sample. Travel characteristics differ very greatly between the population of urban and rural areas, between socio-economic groups, and between different age groups.
- 51. Holiday visits, both at home and abroad, are more frequent in some seasons than others. The closer the inquiry is timed to the visit, the greater the efficiency of recall will be, provided that the inquiry does not impinge on the holiday period itself for then the risks of non-contact would more than offset the efficiency of recall. The relative tranquillity of the home compared to the hurly-burly of the frontier does not necessarily produce more reliable results.

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If holiday inquiries are integrated with other sample census inquiries, the timing may be very inappropriate. This is particularly true if the travel inquiry forms part of the census itself - in the Federal Republic of Germany, for instance, the densest micro-census is taken in the spring, which is also a common period for population census inquiries.

52. Student and business travel is not appropriately covered by household surveys. Travel undertaken for study abroad, although often an important component of travel debits, is a characteristic of only a very small section of the population. For this reason, the household sample survey can take account of such visits only at relatively high cost and subject to a wide margin of error. Business trips are also undertaken by a small section of the population; they are usually of short duration, but expenditure per trip and per day tends to be high, and the travel involved therefore economically significant. The frequency of trips made by each person is high, and business visits cannot be ignored if a reasonably complete picture of the trend in travel for most countries is to be obtained. This requires separate inquiries to be made from commerce and industry to measure business travel and from educational institutions to measure student travel.

ANNEX

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