PROPOSED COMMON QUESTIONNAIRE FOR ORGANIZATIONS TO COLLECT DATA ON EXPENDITURE BY VISITORS IN COUNTRIES

Research on international experiences in measuring tourism expenditure associated with inbound tourism

Report by the World Tourism Organisation

This paper concerns the project co-funded by Canada (Canadian Tourism Commission), Spain (Instituto de Estudios Turísticos), Sweden (Swedish Tourist Authority) and WTO (World Tourism Organization), and developed by the firm Araldi during the period 2000/2001.

The purpose of this project was to examine various experiences relative to statistical operations used to estimate tourism expenditure. In some of the cases analysed (Canada, Finland, France, Italy, Mexico, Spain, Sweden and the United States), estimating expenditure is the main aim of these operations; in others, this estimation is just one of the uses to which a questionnaire basically designed for other purposes can be put.

This study represents an entirely new field of research in the sphere of tourism statistics. It has a marked methodological component and an unusual degree of specification with regard to case studies: systematized and computerized presentation of the approaches taken to the various phases of the statistical work (sample design, questionnaire design, field work, generation of results, etc.) involved in surveys of this nature conducted by different countries.

This document contains two annexes of a provisional character. They are included as additional information for those members of the ACC Subcommittee who might be interested to know the results obtained during the different phases of this work (in electronic format, these annexes are entitled: “TOUR-EXP Annex 1” and “TOUR-EXP Annex 2”).

The WTO Secretariat will release, in the forthcoming months, the final text duly revised and will prepare a specific publication in order to explain the elements and procedures used in this project as well as the results obtained in the different phases.

August, 2001

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World Tourism Organization (WTO)
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**Annexes:**

1. Comparative analysis of questionnaires  
   (file under electronic format “TOUR-EXP Annex 1”)  

2. Comparative analysis of methodologies  
   (file under electronic format “TOUR-EXP Annex 2”)
1. GENERAL REMARKS

This project covers a research that had as a purpose to develop three clearly distinguished products:

- Comparative analysis of the questionnaires (Part 1)
- Comparative analysis of the respective work process and methodologies (Part 2), and
- A proposal for a general questionnaire (Part 3) to be used for measuring tourism expenditure related to inbound tourism.

In terms of organizational formats, the first point to highlight is that it required the close collaboration of experts from all the participating countries and the coordination of their work.

The participation of experts from the different countries, in order to obtain the three different products mentioned above, has been indispensable in three decisive aspects:

- **Supplying** the questionnaires used and related information necessary for Part 1.

- **Filling out different questionnaires** in order to describe the varied researches on tourism expenditure, as well as the statistical operation involved in each of them (surveys geared to estimating visitor entries and/or departures, manual counts at border posts, visitor surveys at entry points, departure points and in accommodation establishments), necessary to be able to carry out the comparative analysis on systems and methods in each country (Part 2).

- **Analysing the results** obtained by the research team of the firm Araldi.

With regard to its content, it should be mentioned:

- Parts 1 and 2 are **merely descriptive**. Part 1 is characterized by the inclusion, in comparative formats, of data that are representative both of the questionnaires used and the methods of procedure and work tools used to perform the various statistical tasks.

Table 1 reproduces a short example of the results obtained in Part 1, presented in matrix form, and where coloured cells indicate the questionnaire where the question of reference comes from. The results obtained in Part 2 are also presented in a similar way.
Table 1

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<thead>
<tr>
<th>ENGLISH</th>
<th>CAN</th>
<th>FIN</th>
<th>FRA</th>
<th>ITA</th>
<th>MEX</th>
<th>ESP</th>
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<tbody>
<tr>
<td>EXPENDITURE IN HOME COUNTRY BEFORE DEPARTURE</td>
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<td>Was any reservation made and paid in your own country before departure?</td>
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<tr>
<td>Did you use Internet to pay for a service?</td>
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<td>You alone</td>
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<tr>
<td>The group you are travelling with</td>
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<tr>
<td>Size of the group</td>
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</tbody>
</table>

- Part 3 has been more creative, and concerns the procurement of a unified general framework that incorporates aspects that are common to the different countries while maintaining, as far as possible, aspects that are specific to them. Based on this general framework, 1 a general questionnaire on tourism expenditure for inbound tourism has been developed as well as the corresponding general guidelines for its implementation.

The materialization of the contents of each of these three Parts of the analysis hinges on the availability, a priori, of a formal methodology for designing questionnaires and a definition of the different tasks comprised in the statistical undertaking. This allows to count on a more objective basis than the one generally used in similar comparative analysis.

Both the data-capture and data-analysis parts follow the norms laid down by the Grafo_Test Methodology (so called because it applies the graph theory to the design of tests or forms).

2. COMPARATIVE ANALYSIS: THE QUESTIONNAIRES (Part 1)

Some of the countries participating in this study have sent several model questionnaires. These different models have been integrated as a single questionnaire per country, in order to allow the comparative analysis to be undertaken.

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1 This general framework is presented under the form of a questionnaire, in order to be able to use it as an instrument to help the design of a specific questionnaire.
The countries for which such a decision has been necessary are the following:

- Finland: from which three different models have been received. Two of these three models were different in content, in order to shorten the survey duration:
  - Survey at borders: Form 1 and Form 2
  - Departure survey: Form 1 and Form 2
  - Entry survey

- Mexico:
  - Survey on frontier travellers residing abroad
  - Survey on tourists residing abroad who visited Mexico

- Sweden:
  - Survey on persons residing abroad in accommodation
  - Survey on persons residing abroad at border points.

In order to establish the matrix integrating all the information obtained from the different countries' questionnaires, it has been necessary to homogenize them. That means that each questionnaire has been transformed into Grafo_Test format. To reach this point an order number is assigned to each of the Characteristics of an Entity. The Domains of each of the Characteristics are also connected through pointers, identified by means of digits enclosed in a circle, which show the sequence of the different questions.

The schema reproduced in Graphic 1 allows the homogenisation of each questionnaire: the following example, related to Canada, highlights the differences between the original and the transformed questionnaire.
By structuring the questions proposed by each country in a “common language”, an immediate comparative analysis between different questionnaires can be made. The results obtained can be seen in Annex 1 (in electronic format TOUR-EXP Annex 1).

3. COMPARATIVE ANALYSIS: METHODOLOGICAL BACKGROUND (Part 2)

In order to gather the different types of information, it was decided to design an ad hoc Manual, to be implemented by means of a computerized programme, and easy to be used by each of the countries involved in this research. The results obtained can be seen in Annex 2 (in electronic format TOUR-EXP Annex 2).

There were two main reasons to prepare this Manual:

- On the one hand, if we used the methodological references already published, the process to come to the comparative analysis might have been tortuous and difficult for the informers. Our aim was to pick up the diverse specifications that may be presented in the study of a statistical operation, both spatial (diversity of countries) and temporal (different versions of the same type of operation in a country).

- On the other hand, because it was thought of great importance to keep some kind of information that is not generally mentioned in the methodological references normally published.

The Manual was designed with eight modules (each of them including an explanatory note, the corresponding questionnaire and a brief description of the
aims of the answers to each question included in it). The structure of the Manual and the order of importance of its modules meet the concept of work process for statistical operations.

From this standpoint and in relation to the statistical work process, the methodology applied is based on the premise that it is just as important to describe the end data presented in book, leaflet or database form, as to explain the conditions in which they have been obtained. Hence the importance, in terms of mirroring the outcome of the entire specific statistical work process, of ensuring that the questionnaires that need to be completed refer both to the documentation on the end results generated and to the intermediate data produced, and also to the methods used to obtain both sets of data in the course of the various statistical operations. In the case of research on tourism expenditure, the nature of the statistical operations conducted in the countries studied varies substantially: counts of vehicles at border entry and exit points, surveys of traveller entries at border points, expenditure surveys at border exit points, expenditure surveys in tourism accommodation establishments, etc.

The Manual has been designed as a computerized programme, implemented in Excel. It includes two introductory modules (M1 and M2) that allows to know not only the content of the respective tourism expenditure surveys, but also the administrative records used and the number of statistical operations involved. Depending on this, the application provides another five modules (M3 to M7) that can be used to describe each of them. The content of these modules is as follows:

- Organizational aspects
- General data
- Software used
- Work team
- Administrative documentation

Finally, M8 is an extra module for specific remarks and for identifying further work envisaged by the country in a medium term.

The content of each module is described below:

**Module 1.** In order to gauge the diversity of situations that can exist in the various countries, a brief questionnaire has been prepared for the purpose of ascertaining:

- Whether estimates of visitor flows and tourism expenditure are the result of two independent statistical operations;
- Whether both resident visitor flows and non-resident visitor flows are studied;
Whether, in order to estimate expenditure statistics, a greater or lesser level of disaggregation of visitor flows is used (by entry points, country of residence, purpose of trip, type of accommodation, number of nights, etc.);

- Whether, irrespective of the level of disaggregation used in relation to the flow of visitors whose average expenditure is the aim of the operation, steps are also taken to try to ascertain the breakdown of expenditure by items (transport, accommodation, food and beverage, etc.) and in terms of the organization of the trip (all-inclusive package holiday, travel agency, independent). Obviously, the greater the disaggregation level, the greater the capacity for analysis, although in this case a bigger sample would obviously be required;

- Whether, in addition to specific questions on expenditure, questions are also included on the activities carried out by visitors in their countries of destination and on satisfaction levels in relation to a series of aspects.

**Module 2**. The complexity of the phenomenon being investigated will determine the different sources and different types of statistical operations that may be required. Estimates of tourism expenditure usually require the implementation of more than one statistical operation (surveys geared to estimating visitor entries and/or departures, manual counts at border posts, visitor surveys at entry points, departure points and in accommodation establishments) in addition to administrative records (foreign currency exchanges monitored by the central banks in each country, automatic vehicle counts made by the traffic authorities, databases of scheduled flights and/or compiled by air traffic authorities, etc.).

**Module 3**. With respect to each statistical operation, the data compiled with regard to organizational aspects will consist of, in addition to identification data, methodological data such as information on types of research (counts or surveys), technical characteristics (type of sampling, sample size, data collection system, data recording system, error detection and correction system, imputation system, purging system, extrapolation system, data storage and publication system) and periodicity.

**Module 4**. Statistical data is taken to mean any set of clearly differentiated data that it is deemed important to conserve insofar as it represents the result of a significant phase of the work process. This way of defining what are understood as statistical data is very useful, despite its generic nature. Indeed, it is this definition’s high level of general applicability that opens such a wide range of new possibilities. The aim is to do away with the old tradition whereby statistics were assimilated with statistical data tables published in the form of books or leaflets. The development of information technology obviously means that the contents of magnetic files and relational databases also consist of statistical data. The new approach nonetheless goes one step further. Other data that can be exploited for statistical purposes include:
- Computerized files stemming from the process of recording forms;
- Files resulting from the correction of errors detected with the systematic application of validation criteria;
- Files containing end data, questionnaire by questionnaire, prepared for extrapolation to the reference universe, after the corresponding corrections and imputations have been made.

A wide range of possibilities exists with regard to the ways in which end data can be presented:

- Statistical tables with a certain level of disaggregation in their double-entry variables can be entered into databases, thus leaving it to the final user to decide what levels of aggregation to use. These can be called aggregate databases.

- This option is nonetheless limited, hence the advisability of generating pre-tabulated databases. This involves putting on databases, instead of statistical tables, records of data that are representative of the number of cases that meet a series of requirements. These requirements are determined by the Cartesian product of the Domains of a series of attributes. For example, number of non-residents, tourists, who have entered via airport, from a certain country, for the purpose of working, who stay in hotels, who stay less than “X” nights and who are on their way to a specific destination.

- In order to make estimation possible, files containing end data can be placed in the database, questionnaire-by-questionnaire, ready for extrapolation to the reference universe insofar as the corresponding corrections and imputations will already have been made. However, to limit the access of potential users to all the pertinent data, it is sometimes deemed necessary to take steps to create partial databases from primary end data.

**Module 5.** The growing technical refinement of work processes makes it increasingly important to ascertain what computerized techniques are used both by the statistical institutions themselves and by the enterprises that are hired to conduct at least the cumbersome fieldwork.

Irrespective of the organizational framework, the use of handheld computers for data collection will become increasingly frequent, either for making counts at border posts or for conducting actual surveys. Obviously the use of such tools requires an understanding of their programming languages and means that the recording phase will become a residual procedure, although this does not necessarily obviate the need to prepare traditional recording systems in the event that survey systems using handheld computers fail.
While the data-recording phase is inevitable, there is an increasing
tendency for this process to be intricately linked to fieldwork rather than being
deferred over time and postponed until the conclusion of the survey phase. This
is a significant step forward and one that makes it possible for the validation
phase to take place parallel to field work and data recording. Clearly, the
detection of errors during the course of fieldwork allows for immediate contact
with the interviewers and even, in some cases, with the respondents.

**Module 6.** The scope and diversity of the institutions and people who
generally take part in the various statistical tasks is huge. This module has been
designed for the purpose of obtaining indicators of the complexity of these
teams to which end the aim is simply to identify the institutions involved, both
public and private, indicating their main field of activity and their involvement in
the statistical work process, and the persons responsible for carrying out the
most important tasks.

**Module 7.** Although this is a key aspect of the work process, it frequently
tends to be overlooked once the task has been performed. In addition to the
advisability of documenting each phase of the statistical work carried out, it is
also important for other countries to familiarize themselves with the practical
methods used by each country to tackle and resolve the least known, albeit
essential, administrative aspects. The aim is NOT to collect all the pertinent
administrative documentation but simply to ascertain what it consists of and
whether it would be available should the need arise. Since the casuistry can be
very varied, in principle, the use of an open system can be used for the
response fields. It stands to reason; however, there will be no marked
differences between the administrative systems of one country and another.

**Module 8.** Although the accent is on defining a generally applicable
statistical work process model that will enable each country to select the
structure that best reflects its situation, it is inevitable that they will contain
vague aspects and several gaps. Hence the need for steps to be taken to
provide a complementary and explanatory description of all the aspects that
these countries feel they have not had the opportunity to present suitably in the
previous modules.

4. **WTO PROPOSAL OF A GENERAL QUESTIONNAIRE RELATED TO
   INBOUND TOURISM EXPENDITURE (Part 3)**

As already mentioned, the main priority of this research project was to obtain a
unified general framework (incorporating aspects that are common to the different
countries while maintaining, as far as possible, aspects that are specific to them)
with the objective of designing specific questionnaires that could have a general
application by different countries (with respect, for example, to different forms of
tourism, different institutions interested, etc.).
It was an ambitious objective in itself since, at the beginning, it was difficult to guarantee its technical feasibility and it was not evident whether the complexity of the questionnaires used by the countries having participated in this project, could have a common and solid background to initiate it.

Once the general framework obtained\(^2\), the process to design a questionnaire must take into consideration, on the one hand, the characteristics of the tourism economy of the country(ies) of reference and, on the other hand, the main technical characteristics (that is, statistics related to the operation to be developed).

Since the statistical operations analysed are diverse (for example, while Sweden undertakes expenditure surveys in hotels, the rest of the countries analysed undertakes frontier surveys by all means of transport - except the USA that limit themselves to air traffic - ), it is possible to suggest different approaches.

The WTO has chosen the following scenario:

(a) a country where “inbound tourism” is important (not only with respect to arrivals but also with respect to expenditure in the country in terms of the “travel” item of the Balance of Payments) and, more specifically “tourists” (that is, where the importance of non-resident “same-day visitors” at national borders is not relevant); and

(b) where it is possible to make interviews at national borders (that is, in the different access routes –air, rail, road or sea- when the tourist leaves the country).

The proposal offered by WTO to those countries willing to undertake a statistical operation on tourism expenditure of non-resident visitors, or to update/revise the one in force, is a basic questionnaire with a series of guidelines for its application. In principle, this could lead to the use of a common questionnaire by a group of countries, with a similar implementation and, consequently, the data obtained could be, to a great extent, comparable and reliable.

(It is obvious to say that the questions included in this general questionnaire can be completed with others contained in the unified general framework of reference).

The WTO proposal is focused to develop the System of Tourism Statistics and can also be used in the preparation of the tourism satellite account (TSA) even if, in this case, the level of disaggregation of expenditure is less ambitious than in the TSA\(^3\). In any of these possibilities it will help to have inter-institutional co-operation

\(^2\) During the next meeting of the ACC Subcommittee on 18-20 September 2001 in Vienna, these results will be distributed, together with a provisional proposal of general questionnaire proposed by WTO.

\(^3\) It should seem reasonable to believe that the most efficient way to obtain the information related to the structure of this kind of expenditure (according to the different products consumed) should be to undertake destination surveys, with a multiyear time span.
between National Tourism Administrations (NTAs), Central Statistical Offices (CSOs) and Central Banks (CBs), since the information to be obtained could be used by any of these organizations (analysis of the main generating markets, estimate of the consumption item for non-residents in the country of reference by the National Accounting system, and the separate estimate of the item related to, respectively, “Travel” and “Transport of passengers” in the Balance of Payments).  

Some other units could also be interested by the data obtained; that would be the case for associated enterprises to tourism industries that could use the huge amount of information records generated by the operation: in fact, the available database would be of great relevance to estimate the average daily expenditure of visitors according to those aggregates which are relevant for a business perspective.