



NEW STATISTICAL INITIATIVES IN THE FIELD OF TOURISM

- ⇒ **Tax sources and tourism industries:
structural approach**
- ⇒ **Using VAT data for developing short-term
statistics**
- ⇒ **Business tendency surveys applied to
tourism industries**

Report to OECD Statistics Directorate

**Antonio MASSIEU
Chief, Statistics and Economic Measurement of Tourism**

List of abbreviations and acronyms

ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
ATO	Australian Taxation Office
BR	Business Register
CB	Central Banks
EU	European Union
Eurostat	Statistical Office of the European Communities
GDP	Gross Domestic Product
GST	Goods and Services Tax
IATA	International Air Transport Association
IEF	Instituto de Estudios Fiscales (Spanish Institute for Fiscal Studies)
INSEE	Institut national de la statistique et des études économiques
ISIC Rev. 3	International Standard Industrial Classification of all Economic Activities, Revision 3
NACE Rev. 1	General Industrial Classification of Economic Activities within the European Communities, Revision 1
NAICS	North American Industry Classification System
NSO	National Statistical Office
NTA	National Tourism Administration
OECD	Organisation for Economic Cooperation and Development
SME's	Small and Medium size Enterprises
SNA93	System of National Accounts 1993
STS	System of Tourism Statistics
TSA	Tourism Satellite Account
UN	United Nations
UNSC	United Nations Statistical Commission
VAT	Value Added Tax
WTO/OMT	World Tourism Organization

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“A statistical agency should not automatically initiate a new survey in response to every demand for information. Rather, it should systematically attempt to react to new demand by exploring how they might be satisfied using regularly collected data or, failing that, by examining whether the administrative records already in the hands of government can address the new request, at least to some degree. Whether or not, or rather to what extent administrative records can be used to replace or to supplement statistical survey information, is a very complex issue and the answer also depends very much on specific national situations. Statisticians tend to be wary of the quality of administrative information, in terms of concept and coverage.

Nevertheless, the attractive features of administrative records are that they are to be collected or have been collected anyway. It is probably true in many countries that some administrative records, e.g. tax records, have a very good coverage of parts of the population, and that the rate of response is substantially better than that achieved by a statistical agency. Moreover, there is always the possibility of improving on the information yielded by those records by supplementing them with data obtained from a much smaller sample of respondents.”

Handbook of Statistical Organization, Third Edition: The Operation and Organization of a Statistical Agency, United Nations, Department of Economic and Social Affairs - Statistic Division, Studies in Methods, Series F No. 88, (New York, 2003)

EXECUTIVE SUMMARY

Foreword

Recent international experience shows that tax records can be a valuable source for the development of short-term service statistics, specifically for tourism industries in countries with mature tax systems. In these and other countries, business tendency surveys can be the cheapest and fastest tool for monitoring and forecasting business cycles in these industries as their rate of production reflects a characteristic of tourism activity, namely, its marked seasonality.

Promotion of the statistical use of tax sources in the case of tourism industries and of quarterly business tendency surveys in the field of accommodation is the proposal being made by the World Tourism Organisation (WTO/OMT) to the Organisation for Economic Cooperation and Development (OECD) for consideration by the newly-created OECD Short-term Economic Statistics Expert Group and a forthcoming Expert Group on business surveys.

More specifically, the analysis of experiences (in Australia, Canada, France, Netherlands, Spain, the United Kingdom and the United States) suggests that, prior to implementing new statistical operations for analysing tourism in any given country (with business tendency surveys being a highly attractive possibility), it might be reasonable to explore the relevance of the corresponding cyclical (monthly and/or quarterly) profiles of sales figures obtained from Value Added Tax (VAT) or from its equivalents (Goods and Services Tax – GST).

This Report is an open document whose sole aim is to encourage reflection on the relevance of tourism as a potential case study for the above-mentioned Expert Groups. The fact that WTO/OMT is submitting this Report to the OECD Statistics Directorate is due to its historical leadership in the area of short-term economic indicators from the perspective of the overall business cycle and also because it was commissioned by the United Nations Statistical Commission (UNSC), in its 2003 meeting, to promote the development of this type of indicator in the field of services.

I. INTRODUCTION

A. The key role of administrative records in the development of tourism statistics

The information on international flows of visitors and other types of travellers that is produced by some traffic regulating authorities has proved very useful in the study of tourism demand. This is one of the conclusions of the WTO/OMT project (*WTO/OMT, 2003*) on international experiences that was begun in 2001 and comprises two phases. The first (which ended in March 2003) led to a proposal for a model border survey for measuring visitor expenditures associated with inbound tourism. The second (which began in

May 2003 and is due for completion in June 2004) aims to define some general guidelines for improving the measurement of international flows of visitors at national borders.

This experience has confirmed that the use of administrative records should be promoted, partly because it is impossible for reasons of cost to develop the System of Tourism Statistics and therefore, neither Tourism Satellite Accounts (TSA) could be developed using just strictly statistical operations. We consider that what we have learnt can also be applied to the development of tourism statistics on the supply side, that is, in regard to tourism characteristic products and industries. The list of tourism characteristic products and activities considered in this Report can be seen in paragraph 5. They show a clear correspondence with Central Product Classification (CPC ver. 1.0) and International Standard Industrial Classification of all Economic Activities, Revision 3 (ISIC Rev. 3).

B. The statistical use of tax sources and business statistics in the case of tourism industries

Main tax sources for enterprises are VAT monthly/quarterly/annual returns, Annual return of Corporation Income Tax, Annual return of Personal Income Tax for unincorporated business (Sole proprietorships and Partnerships), and employer's monthly/quarterly/annual tax return with payroll data (wages and employment, social contributions and withholding at source of personal income tax). In some countries, as in Spain, social insurance contributions and withholdings on wages are filed separately to the Social Security Administration and the Tax Agency, respectively.

In the countries considered in this Report, all with mature tax systems, tax returns have a nearly exhaustive coverage of target population, good quality of reported data and timeliness. Moreover, there is the possibility of improving on the information yielded by each return, linking the returns for each enterprise by means of the permanent and unique identifier, when it exists, or by matching techniques, when there are two or more.

The Report considers in some detail the case of the United Kingdom Feasibility Study into the use of VAT data in place of monthly business surveys of turnover (*Jones, G., 2000*), to illustrate the problems of matching VAT records with Business registers, differences between the statistical and fiscal concepts of turnover (or other variables as wages and employment) and differences in industry classification of units. Results of Statistics Netherlands in matching of VAT returns with Business Register are also illustrated in this section.

II. TAX SOURCES AND TOURISM INDUSTRIES: STRUCTURAL APPROACH

A. Tax sources and Business Register: the 1995 expansion

High-quality Business Registers (BRs) are the heart of business statistics and business data analysis. BRs provide a sampling frame for structural and sub-annual surveys, and not just a frame, but a tool for the preparation and coordination of surveys and for grossing up the results. BRs are also a tool for producing statistics of business population and demography. BRs can be seen, also, as the natural place for linking and integrating tax and survey microdata. And, as French SIRENE (*Système informatisé du répertoire national des entreprises et des établissements*) illustrates, BRs can be also a source of administrative and informational services to enterprises, especially small and medium enterprises.

The key role of tax and social security registers in the development of high quality Business Registers can be seen in the experience of most developed countries, where tax registers have nearly exhaustive coverage. In U.S, Canada, France and Nordic countries (Denmark, Sweden, Norway, Finland), BRs have been using tax registers for decades but in most European countries the use of tax registers is more recent and has been expanding since 1995. That year, Spain presented DIRCE (*Directorio Central de Empresas*) which integrates the tax register (VAT and labour income withholding) and Social Security Register (employers). Also in 1995, the United Kingdom presented the Inter-Departmental Business Register (IDBR) maintained by National Statistics (NS) which combines the former Central Statistical Office (CSO) VAT-based business register and the former Employment Department (ED) employment statistics system based on PAYE (Pay as You Earn) scheme. Also in 1995, the Netherlands, Denmark and other European countries showed important advances in the quality and coverage of their Business Registers.

Eurostat has seen the centralised Business Register to be so important that a special regulation (*Council Regulation (EC) No 2186/93, 1993*) was passed in 1993. The European Union (EU) drive towards a harmonised BR and the use of fiscal microdata dates from 1989, when a new EU resource, based on Gross National Product (GNP) was introduced (*Council Directive (EC) No 89/130, 1989*). Since that year the issue of the reliability of National Accounts has no longer been an academic issue, or a statistical one. It has important financial as well as political consequences. Council Regulation 2186 of 1993, together with the Programme for the exhaustivity of GNP in 1994 (*Commission Decision (EC) No 94/168, 1994*), are understood as answering the need to increase the reliability and comparability of GNP of member states. This has forced an interest in fiscal data on the part of National Statistical Offices, as these are useful not only for BRs and statistical purposes but also for estimating the underground economy and tax evasion.

Recent developments in the use of administrative sources for business registers and business statistics are also in line with advances in information technology (IT), including electronic filling of tax returns.

In some EU member states, such as the Nordic countries, United Kingdom and Netherlands, there are projects to develop Single Business Registers as a means of achieving effective communication between businesses and government, improving co-ordination between government bodies and optimising the operation of government services.

In non-European developed countries as Canada, Australia, United States and New Zealand, the statistical use of fiscal data has been expanding since the late 1990s, in the context of close co-operation between National Statistical Offices and Tax and Social Security Departments.

B. Business Demography, a new statistical field

Birth, survival rates and death of enterprises, changes from unincorporated to incorporated business, business mergers and other related processes are the content of Business Demography, a new statistical field now developing based on Business Registers. The need for data on business demography stems not only from statistical offices but also from policies aimed at developing conditions to facilitate the creation of new enterprises and enhance the possibilities of growth of existing ones in order to create more and better jobs.

In some tourism industries, as in Restaurants and cafes, with a great number of unincorporated (sole-proprietorships and partnerships) and non-employing enterprises, the first and most basic contribution of tax registers to Business Demography is the better knowledge of the structure and dimension of enterprise population and, especially, of the unincorporated and non-employing subpopulations.

1. Australian Business Register includes non-employing businesses

The case of the Australian Bureau of Statistics shows the key role of taxation registers to extend the coverage of statistics to include the non-employing business sector (*ABS, 1999*). It includes non-employing units in its population of business units (*ABS, 2000*). The 1999 Information Paper underlines the impact of non-employing businesses, not only on the total business income, but specially on the dynamics of industries:

“As well as being significant contributors to the overall level of economic activity in some industries, non-employing businesses are sometimes a major influence on the changes from year to year in the performance of many industries.

This suggests that a longstanding assumption in compiling economic statistics, that the performance of non-employing businesses was highly correlated with the performance of employing businesses through the business cycle, may not be appropriate. Through the expanded use of Australian Taxation Office (ATO) data described in this publication, the ABS and its clients

have access to a regular and relatively reliable source of information to monitor the changing contribution of this significant sector of the Australian economy.”

2. *United States Bureau of Census non-employer and single/multiunit components*

Tax records from the Internal Revenue Service (IRS) and the Social Security Administration (SSA) play a central role in the Census Bureau's production of economic statistics.

As in the case of Australia, the non-employer component (firms with no paid employees) for the economic censuses and the annual service statistics are obtained from IRS tax returns.

From 1998, Census Bureau staff have been looking at the impact of replacing sales or receipts data collected via survey forms with annual tax return data for single-unit establishments in the annual survey of retail, wholesale and services.

3. *Spain's detailed breakdown of tourism industries*

In Spain, economic statistics based on tax forms, which are described below under 2., could provide turnover, wages employment and other variables with a more detail on tourism industries.

C. Some examples of structural statistics and tax data

Business income tax returns, specially for Corporations, have a high statistical value from an accounting point of view. Also, linking different tax returns by means of a unique and permanent identifier can increase the reliability of estimates and provide proxies for some relevant variables not directly observed.

The examples referring to Spain, Australia and Netherlands also illustrate the importance of BRs for the analysis of the economic structure of tourism industries and for use in the development of TSAs.

1. *Spain's experience linking VAT & Labour Income Withholding*

Spain's Fiscal Administration has produced yearly statistics based purely on fiscal data, covering the period 1989-1995 (*Enterria, P. et al, 2002*). Data on variables such as: number of salaried and retired persons, number of unincorporated enterprises, value added, turnover, exports, imports, wages, etc. have been derived from different fiscal sources such as VAT, Personal Income Tax, Corporate Income Tax and the Economic Activity Tax. The experience, which can also be described as an experiment, lasted from 1991 to 1998, took place in the Instituto de Estudios Fiscales (IEF) and resulted in three different

statistical products: Business Statistics, Statistics on Company Accounts (Incorporated Firms) and Statistics on Employers/Employees.

In the business statistics (*Instituto de Estudios Fiscales. Agencia Estatal de la Administración Tributaria, 1998*), VAT annual returns are linked, by means of the Fiscal Identification Number (NIF), with Customs & Excise forms, annual return of Withholding of Labour Incomes and Tax on Economic Activities (TEA) records.

In short, Spanish annual VAT returns, together with Customs data, provide:

- An approximation to the production account, with Value Added (VA) as the balancing item between sales (S) and current purchases (CP).
- Capital purchases (KP).
- Exports (X) and imports (M), both to other EU member states (Intra-community trade) and to third countries.

Annual Returns of Withheld Income Tax - Labour Incomes (*Declaración anual de retenciones sobre rentas del trabajo* or *DART*) give a good measure of wages and a proxy of employment. There are some similarities with the US W3 form, with the UK Pay as You Earn (PAYE) and with the French DADS (*Déclaration Annuelle de Données Sociales*), but the Spanish DART does not include social contributions.

The link between VAT data and data on earnings means that the relationship between wages and sales can be established and, together with employment estimates, allows the calculation of productivity ratios and unit labour costs.

Paragraph 45. shows some results from the 1995 Business Statistics referring to tourism industries.

2. *Australia's accurate presentation of Business Input Costs*

The Australian Bureau of Statistics (*ABS, 1999*) presents a good example of the supplementation of the relatively small-scale survey the ABS conducts in respect of selected industries with business income tax data provided by the Australian Taxation Office (ATO), achieving production of a much finer dissection of business input costs by data item and industry than has been feasible in the past.

Paragraph 47. shows some results for years 1995-1996 in some relevant tourism industries.

ABS found a strong correlation between data items collected from the sample of businesses and those data items available from business income tax records, meaning that the data collected from the much larger ATO sample could

be used to improve accuracy of the estimates for many of the data items of interest.

3. *Spain's example of Balance sheet and Profit and Loss account data in the Accommodation industry by business size*

The Statistics on Company Accounts (*Instituto de Estudios Fiscales. Agencia Estatal de la Administración Tributaria, 1998*) compiled by Spain's IEF shows the Balance Sheet and Profit and Loss Account of incorporated businesses based on annual Corporation Income Tax returns. The data items in the returns are adapted, from 1991, to the compulsory General Accounting Plan of 1990.

The existence of General Accounting Plans, as in France or Spain, greatly facilitates the statistical use of corporation income tax returns. National statistical offices and tax offices in countries like Australia and Canada are making great efforts to get standardized financial statements. Australia's Business Activity Statement (BAS) and Canada's Generalized Index of Financial Information (GIFI) are examples of such standardized financial statements. GIFI is being introduced to facilitate the electronic filing of Canadian corporate tax returns.

4. *Netherlands experience linking VAT & Corporation Income Tax*

The fourth example refers to Statistics Netherlands and the new possibilities opened by the Statistics Act of 1996 which gives the statistical office new powers to seek access to fiscal data. Since 1997, Statistics Netherlands has been making extensive use of VAT data and Corporate tax data to compile structural business statistics on small wholesale trade enterprises. For this population, total turnover and the number of active enterprises are estimated from VAT data, while the structure of their profit-and-loss accounts is determined from Corporate tax data. It appears that the results from fiscal data compare rather well to traditional sample survey results.

Statistics Netherlands is planning to extend the use of fiscal data to other statistical areas. They are considering the use of VAT data to improve the monthly retail trade turnover statistics (an aspect considered in the next chapter), as well as the use of both VAT and corporate tax data to improve and augment the annual retail trade survey.

III. USING VALUE ADDED TAX (VAT) DATA FOR DEVELOPING SHORT-TERM TOURISM STATISTICS

France and Belgium have, for decades, been using VAT monthly data to develop turnover indicators. Since 1968, Denmark has been compiling quarterly statistics of turnover in non-agricultural industries based on VAT data. In New Zealand and Spain the results are more recent, and Canada, Netherlands and United Kingdom are planning to do the same. In Chapter III., section B. we have seen some references to the United Kingdom Feasibility Study into the use of

VAT monthly data and the problems with identifiers, variables and classification. Belgium is the only state which also publishes monthly indicators of capital purchases based on VAT monthly returns.

A. Canada's new initiative using tax data to fill gaps in short-term statistics for service industries

In order to fill the gaps in short-term economic indicators for Services, work has started with Statistics Canada's Tax Data Division to produce sub-annual information from tax collection data for service industries where it does not exist. The tax data also have the potential to reduce the response burden of monthly surveys on small establishments. For example, work is in progress to complement or replace the Monthly Restaurants, Caterers and Tavern Survey with estimates from the tax data.

B. France's long-term tradition of the statistical use of tax data

The French INSEE has been using monthly VAT data since 1976 to compile monthly indicators on turnover. Until 1994, the Tax Office provided only a sample designed by INSEE. Since 1995, the INSEE has had access to the whole population but only a sample is used for compiling turnover indicators.

The sample size in 2002 was 23% of companies in Transport and 12% in other services.

Turnover indicators in constant prices, using deflators, are also compiled for retail trade and accommodation and food services.

C. New Zealand's first results expanding short-term indicator of sales and purchases in the service sector

Goods and Services Tax (GST) is a tax on the consumption of most goods and services in New Zealand. It was introduced in New Zealand on 1 October 1986 and is currently charged and accounted for at a rate of 12.5 percent. The tax is collected by the Inland Revenue Department (IRD). Statistics New Zealand has had access to tax records since the introduction of the IRD's computer system in 1995 and is currently using GST records to update and maintain the Business Frame. GST sales are also being investigated for potential use as a sample design variable for some surveys, in preference to the traditional full-time equivalent employees variable.

The availability of GST data from the IRD has provided the opportunity for the development of a short-term economic indicator. The GST database contains a vast amount of information which has never been available before. It has the potential to provide:

- An economy-wide sub-annual industry economic indicator series.

- A time-series of detailed industry information useful for micro-analysis.
- Potentially, regional information.
- Data to replace the existing Quarterly Manufacturing Survey, Retail Trade Survey and Wholesale Trade Survey collections, thereby achieving cost efficiencies and reduction in respondent load.

The initial release of the experimental series include:

- Monthly sales and purchases.
- Actual, seasonally adjusted and trend series.
- By ANZSIC division (17 industry divisions).
- By 78 ANZSIC based industries in electronic format for interested users.

D. Spain's large enterprise indicators

In 1997, the Spanish Institute for Fiscal Studies (IEF) presented (*Rey, P., 1997*) a pilot study on turnover indicators obtained from the monthly forms filed by enterprises identified as large in the Spanish Tax Agency system, being those with more than 6 million euros, amounting to 66% of total turnover of the whole population of VAT filers.

Low cost and ease of processing are two important advantages of these indicators. As for their reliability, this Report offers some convincing illustrations, taken from the IEF project and other sources.

The three examples given stress the validity of figures for large enterprises as a short-term indicator and their coherence with similar indicators obtained from other statistical sources.

IV. BUSINESS TENDENCY SURVEYS APPLIED TO TOURISM INDUSTRIES

It has been stressed that the statistical use of tax data is mainly possible when the tax system has reached maturity. In countries with developed tax systems, these surveys are a good example of the complementarity of administrative and statistical data: quantitative variables from fiscal records and qualitative variables from surveys. France is the best example due to its long-term experience, although this Report also mentions the planned survey in Canada for the Accommodation industry and Spain's recent survey including also Transportation and Travel Agencies.

In developing countries, tax information systems do not usually possess the coverage and data quality needed for statistical uses. In such cases, opinion

surveys are a cheap and rapid tool for monitoring and forecasting business cycles in tourism industries as their rate of production reflects a characteristic of tourism activity, namely, its marked seasonality.

FOREWORD

We believe that certain administrative records should also be used for statistical purposes for tourism. Sources relating to the regulation of international passenger traffic and fiscal sources may be specially relevant in the following cases:

- A country which has developed a Tourism Satellite Account (TSA) and which wishes to improve the coverage or quality of some of its tables and/or aggregates (with regard to both visitor consumption associated with different types of tourism, and the supply of tourism characteristic industries).
- A country drawing up a Tourism Satellite Account but that does not have the necessary breakdown in the business surveys that generate some of the data needed for estimating the supply of goods and services demanded by visitors.
- A country that wishes, simply for the purpose of economic analysis, to have additional information to carry out or complete studies on the impact of tourism activity.

Although more and more countries now have experience in the use of the former type of administrative records, there is very little experience in the case of fiscal sources.

The experiences used for drawing up this Report* (for Australia, France, Netherlands, New Zealand, Spain, United Kingdom and United States) support this opinion and we believe they support the proposal made by the World Tourism Organisation (WTO/OMT) to the Organisation for Economic Cooperation and Development (OECD). In brief, this states that the tourism sector may be a case of special interest for the development of short-term service statistics based on tax records and also for exploring the use of business tendency surveys in tourism industries.

More specifically, the analysis of such national experiences has suggested that, before carrying out new statistical operations to promote the analysis of tourism in a given country (and business tendency surveys are an especially attractive option), it might be reasonable to first explore the relevance of the appropriate cyclical sales profiles (monthly and/or quarterly) based on Value Added Tax (VAT) (or other equivalent figures such as the Goods and Services Tax (GST)).

We believed that an approach of this type should start out with a general description of the possible usefulness of fiscal sources for the measurement and analysis of the economic impact of visitors on the various tourism industries. This initial evaluation would necessarily have to refer to the nation as

* Written by Antonio Massieu, Chief of Statistics and Economic Measurement of Tourism of WTO/OMT, based on preliminary versions drawn up by Rafael Frutos and Francisco Melis of the Income Study Unit in the Spanish State Agency for Tax Administration, both of whom have experience in using tax sources, short-term analysis and National Accounts. Suggestions have also been received from Marion Libreros, José Quevedo and Juan Falconí (all of whom are WTO/OMT consultants).

a whole and to an annual period because some of these sources give annual figures (such as Business Income Forms—including Corporation/Personal/Partnership Taxes- and Employer Returns Tax (or equivalent methods used in different countries)).

In line with all this, we wanted this Report to be an open document whose sole aim is to encourage reflection on the relevance of tourism as a potential case study for the work of the newly created OECD Short-term Economic Statistics Expert Group and the forthcoming Expert Group on business tendency surveys. The fact that WTO/OMT submits this Report to the OECD Statistics Directorate is due to its historical leadership in the area of short-term economic indicators from the perspective of the overall business cycle, and also because it was entrusted by the United Nations Statistical Commission (UNSC) in its 2003 meeting, to promote the development of this type of indicators in the area of services.

Though it might seem superfluous, attention should be called to the fact that this Report should not be taken as an initiative aiming to achieve the international comparability of any results obtained, were a significant number of countries to carry out the suggestions it makes. There are many reasons for this (it is a preliminary step, there is insufficient experience, etc.), but perhaps the most obvious is that the experiences used and the fiscal sources taken as references necessarily relate to countries with a highly developed fiscal infrastructure (which are a minority worldwide). In any case, it should be mentioned that statistics and information using VAT data are available in developed and also in developing countries.

That is not to say that in developing countries VAT data are not available or could not be used (Thailand, for instance, has used this source for their TSA exercise) but in general, the access of National Statistical Offices (NSOs) to fiscal data is extremely limited, in part due to the fact of the lack of recognition of the specific situation of this institution regarding confidentiality; another factor, and also related to the role of NSOs, is that in most of these countries, its leadership concerning definition and application of classifications is rarely recognized, even within these institutions themselves. Generating classification and imposing its use across all the spectrum of economic observation, be it through survey or any regulatory practice, supposes already a high degree of acceptance of the central role of the NSO which is usually associated with a high complexity of economic, social and political development.

The Introductory chapter presents some of the basic ideas underlying the Report, such as:

- The development of a System of Tourism Statistics (STS) ¹ requires intensive use of administrative sources if only because it is financially impossible to carry out separate statistical operations to develop such a System. (Important experience has already been gained in the case of

¹ See Annex 1.

records generated by traffic regulation authorities on the different types of access to national borders).

- In the specific case of tourism industries, there is an additional reason for promoting the use of fiscal sources because they alone can offer information at the most broken down level of activity required by the International Standard Industrial Classification of all Economic Activities, Revision 3 (ISIC Rev. 3).
- From this perspective, an initial condition is the statistical treatment of these administrative records; an additional condition could be to associate such records with data obtained in surveys (in line with experiences in the field of international arrivals at national borders).
- In both cases (sources relating to the regulation of international passengers traffic and fiscal sources), the process will require collaboration and cooperation between users and producers which include the National Tourism Administrations (NTA), National Statistical Offices (NSO), Central Banks (CB) and National Economic and Finance Authorities.

The chapter “Tax sources and tourism industries: structural approach”, recounts experiences with regard to certain especially important issues:

- Tax sources and Business Register: the 1995 expansion.
- Business demography, a new statistical field.
- Some examples on structural statistics and tax data.

Though it might seem obvious, we would like to mention that many other issues of interest were not considered –since we thought they were out of its scope-, except for the use of those sources for improving survey design and estimation.²

The chapter “Using Value Added Tax (VAT) data for developing short-term tourism statistics” focuses on this fiscal source (or on other equivalent figures such as the Goods and Services Tax (GST)) which offers enormous possibilities for complementing short-term tourism statistics from the point of view of the overall economic business cycle. More specifically, the applications developed in four of the countries analysed (New Zealand, Spain, France and Canada) are sufficiently illustrative of our conviction that this source could be especially useful for providing output indicators on a monthly/quarterly basis in relation to tourism industries.

Finally, the chapter “Business tendency surveys applied to tourism industries” draws attention to the opportunity for developing such surveys (also called business opinion, conditions or climate surveys because they aim to

² See Annex 2.

collect qualitative information from business managers), provided there is some type of evidence on the cyclical profile of such activities.

In the cases of France (with a long tradition), Spain (as developed during 2002 by the main group of leading companies in the Spanish tourism sector – Exceltur – referring to the industries of Accommodation, Transport and Travel Agencies) and Canada in a survey to be carried out soon (initially referring only to Accommodation), this type of surveys aims to complete the framework of short-term tourism statistics because the statistical series derived from business surveys are, by their very nature, particularly suitable for business cycle monitoring and forecasting.

I. INTRODUCTION

A. The key role of administrative records in the development of tourism statistics

1. When it presented its proposal (*WTO/OMT, 1999*) for a conceptual framework for the TSA in the Enzo Paci Conference in Nice in June 1999, WTO/OMT included in its Chapter V "Extensions" as examples of further developments of the TSA present framework, an employment module, a Tourism Balance of Payments (TBP), expansions of the notion of tourism supply, measurement of the effects of tourism on Government income, extensions in "space and time", etc. All these possibilities were defined very globally because the document only set out to draw attention to the fact that the conceptual framework for the TSA should be understood as work in progress and that some of the future developments might be of interest in different countries.

2. The project, sponsored by the Canadian Tourism Commission, Instituto de Estudios Turísticos (Spain), the Swedish Tourist Authority and WTO/OMT and the cooperation of France, Finland, Italy, Mexico and United States of America was designed to be carried out in two stages: the first (ending in March 2003) led to the proposal of a model border survey for measuring visitor expenditures associated with inbound tourism and the second (begun in May 2003 and due to end in June 2004) aims to draw up some general guidelines for improving the measurement of international flows of visitors at national borders.

3. The final report of the first stage (*WTO/OMT 2003*) has taken very much into account the use of administrative records relating to the international flows of visitors and other types of travellers produced by some traffic regulating authorities. We focused on international arrivals by air (*WTO/OMT and IATA, 2002*) and by road and we analysed the best way of integrating statistical surveys in such administrative records. One of its basic contributions lies in the guidelines for the creation of a statistical universe that can be used for both obtaining random samples for different statistical operations associated with inbound tourism and for upgrading the sample data. This would lead not only to credibility for basic tourism statistics (international arrivals and tourism expenditure associated to inbound tourism flows) but would also offer other applications or advantages.

4. This experience has confirmed the need to promote the use of administrative sources, amongst other reasons because it is impossible for the development of the System of Tourism Statistics (STS) and the TSA to be based on strict statistical operations. What we have learnt in the case of the above-mentioned international project can also be applied to the use of fiscal sources with the objective of developing tourism statistics from the point of view of supply, that is, to the area of tourism characteristic products and industries. Additionally, the required cooperation among National Tourism Administrations, National Statistical Offices and National Economic and Finances Authorities will

reinforce NSOs' leading role by strengthening national statistical infrastructure for this end.³

5. The following table identifies the lists of tourism characteristic products and activities (also referred as tourism industries), proposed for the measurement of tourism economic impacts in the perspective of the TSA conceptual framework and with the objective of international comparability (*UN, WTO/OMT, OECD and Eurostat, 2001*). Both lists have a clear correspondence with CPC (ver. 1.0) and ISIC Rev. 3 (see Annex II of the above-mentioned official document approved by UN Statistical Commission).

List of tourism characteristic products ⁴	List of tourism characteristics activities (tourism industries) ⁴
Products description	Activities description
<p>1. Accommodation services 1.1 Hotels and other lodging services 1.2 Second homes services on own account of for free</p> <p>2. Food- and beverage-serving services</p> <p>3. Passenger transport services 3.1 Interurban railway transport services 3.2 Road transport services 3.3 Water transport services 3.4 Air transport services 3.5 Supporting passengers transport services 3.6 Passenger transport equipment rental 3.7 Maintenance and repair services of passenger transport equipment</p> <p>4. Travel agency, tour operator and tourist guide services 4.1 Travel agency services 4.2 Tour operator services 4.3 Tourist information and tourist guide services</p> <p>5. Cultural services 5.1 Performing arts 5.2 Museum and other cultural services</p> <p>6. Recreation and other entertainment services 6.1 Sports and recreational sport services 6.2 Other amusement and recreational services</p> <p>7. Miscellaneous tourism services 7.1 Financial and insurance services 7.2 Other good rental services 7.3 Other tourism services</p>	<p>1. Hotels and similar</p> <p>2. Second home ownership (imputed)</p> <p>3. Restaurants and similar</p> <p>4. Railway passenger transport services</p> <p>5. Road passenger transport services</p> <p>6. Water passenger transport services</p> <p>7. Air passenger transport services</p> <p>8. Transport supporting services</p> <p>9. Transport equipment rental</p> <p>10. Travel agencies and similar</p> <p>11. Cultural services</p> <p>12. Sporting and other recreational services</p>

³ But this would not be the only advantage of close collaboration between NSOs and statistics professionals with the Treasury and Social Security. Others would include the application of discriminant analysis to inspection, the construction of home microdata bases, microsimulation models, the measurement of accrued taxes versus the usual collected taxes, the measurement of tax benefits, the measurement of concealment and tax avoidance, etc.

⁴ - The list of tourism characteristic products has been established empirically, using previously existing national and institutional lists and the specific knowledge of researchers, and including, in a loose way, the following:

- Products whose supply would cease to exist in meaningful quantity in the absence of visitors;
- Products that represent a significant share of tourism consumption;
- Products whose absence might significantly affect tourism consumption.

In order to achieve international comparability, it would seem legitimate to use a high degree of disaggregation of products, so that the characteristicity of a product could be more easily identified. However, this possibility is limited by the high degree of aggregation in which most countries obtain their information (in most cases, this degree does not exceed the 4-digit level of CPC, Version 1.0). As a consequence, the proposed list of tourism characteristic products, for the time being, presents a high level of aggregation.

Conceptually, the list of tourism characteristic products proposed could include both goods and services. However, for the time being, the list of tourism characteristic products concentrates on services which have been traditionally considered as tourism services because they respond to the more general needs and wants of visitors, such as accommodation, food- and beverage-serving services, long-distance transportation and associated services (including car rentals), travel arranger services, tourism guides, and cultural and recreation services. This restriction responds to two main measurement difficulties:

- The first relates to the great differences within the goods purchased by visitors among countries and places visited;
- The second refers to the fact that the basic statistical information to be used to complete tables comes from the visitors themselves. It has been observed that, in most cases, the use of this type of statistical source makes it difficult to go beyond the broad concepts of "shopping" or "souvenirs".

- Tourism characteristic activities (also referred as tourism industries) can be identified as productive activities that produce a principal output which has been identified as characteristic of tourism.

6. Although the next section considers the use of fiscal sources for tourism analysis from the supply side (which is also of interest, for example, for drawing up the TSA and for designing tourism policies relating to employment), it should perhaps be stated that the satellite approach of the TSA focuses precisely on visitor consumption and the production of the goods and services demanded by visitors. While in some cases, such as collective accommodation services (from a commodity, not a sectorial, point of view), the matched supply of the product is not very different from visitor consumption, in most cases this is not the situation.

B. The statistical use of tax sources and business statistics in the case of tourism industries

7. Our first approach to analysing the national experiences on which this Report is based was structural – that is, how some available fiscal sources in some countries with more developed tax structures offer information that we have seen to be enormously useful for the analysis of the economic structure of tourism industries.

8. From this point of view, we believe that sources such as VAT and the Business Income Forms – including either Corporation/Individual/Partnership/Sole Proprietorship Taxes – and Employer Returns Tax (or equivalent figures in different countries),⁵ are the basis for three types of application that are of special interest for tourism:

- For finding out the population of companies associated with tourism so that a set of basic economic ratios of a structural nature (with their corresponding annual updates) can be related to them at the levels of activity identified in the above-mentioned list of tourism characteristic products and industries. This would be especially useful for promoting the economic analysis of tourism from the point of view of supply and would also support the development of TSAs.⁶
- For the purpose of economic policy, specifically in the area of employment. Fiscal sources allow tourism companies to be grouped according to size (by number of workers or other criteria) with the necessary rigour and precision. They also allow certain economic variables (such as turnover, capital expenditure and wages and salaries)

⁵ For example, in New Zealand, Australia and Canada, the tax equivalent to VAT is called Goods and Services Tax. This is based on the same concept as VAT but it works differently in some cases. In the US, this tax is applied by the State rather than on a federal level and receives many different names although the most common name is “retail sales tax”. These are usually taxes on retail sales rather than on value added.

However, for the purposes of this Report, we have assumed that the special characteristics of VAT and similar taxes do not determine their objectives, approach or proposals.

⁶ With regard to use for developing TSAs, it should be kept in mind that while the TSA is a satellite exercise based on the National Accounts (the SNA93 to be more precise), from the functional point of view, the use of fiscal sources implies a sectorial approach. More exactly, while statistical data for drawing up tables on supply in the TSA are based on sales of goods and services considered as characteristic/connected to tourism produced in the corresponding establishments, from a fiscal perspective the relevant variable is the overall figure for turnover in companies.

to be associated with such groups. This leads the way to rigorous formulation on the potential of tourism to create jobs;⁷

- Design of statistical actions of various types with regard to both structural and short-term perspectives, as described in Chapters II and III of this Report.

9. These applications comply with an important fact fully described in the following chapter of this Report. The structural business surveys designed by NSOs do not usually use the level of breakdown needed in the classification of economic activities for tourism analytical purposes whereas fiscal sources (especially VAT) do. This is simply because, it would be very costly to increase the degree of breakdown needed in such surveys, whereas fiscal sources are usually exhaustive by definition so the activity codes used entail a high level of breakdown.

10. This factor is basic for evaluating to what extent the information obtained from the collection of VAT (both annually and over shorter periods) may be relevant for analysis of the current situation of all or some of the tourism characteristic industries, as with other sub-sets such as Wholesale and / or Retail Trade services, given the pronounced seasonality of tourism activity.

11. Although Chapter III makes precise references to the experiences of Canada, France, New Zealand and Spain, we reproduce here the answer given by the United Kingdom Government to a parliamentary question concerning the statistical use of VAT monthly data.⁸

12. "VAT returns made by businesses to Customs and Excise do include data on turnover. However VAT sources are far from ideal for the purposes of producing national statistics. The data are for the most part collected on a quarterly basis and they are less timely. Also, some businesses are exempt from VAT so that coverage is incomplete. The possible use of these returns to replace or partially replace directly collected survey data is part of the NSO long-term strategic development programme.

In 2000 a feasibility study suggested that it might be possible to use VAT sources more directly. In 2001 NSO piloted and introduced a secure system for transmitting VAT turnover data from Customs and Excise to NSO and confirmed that there would be no legal barriers to such data transfer. We plan to further develop the methodology adopted in the 2000 feasibility study, to prepare inputs to the Index of Production and Index of Services in parallel with those based on business surveys and to quality assure the alternative sources with key users. If this is successful NSO will then move to the much greater use of VAT returns."

⁷ As mentioned further on (2.B. "Business Demography, a new statistical field") tax records are a necessary source for completing the populational universe of companies identified in statistical operations using surveys. "Statistical sources are likely to remain the predominant ones for short-term statistics and for structural business statistics of large enterprises; statistics of SMEs are likely to be based on estimations using administrative sources in conjunction with benchmark statistical data" (*Fuger, M. et al, 2002*).

⁸ www.parliament.the-stationery-office.co.uk/pa/cm200102/cmhansrd/vo020311/text/20311w15.htm

13. As stated above, it is precisely the exhaustive nature of tax sources that makes them useful for the structural analysis of tourism industries, and in the case of VAT, also timeliness is a basic comparative advantage.

14. As mentioned in the case of the Netherlands, (*Braaksma, B. et al, 2000*) "Timeliness does not constitute a real problem for VAT. The tax authorities require declarations on a monthly, quarterly or yearly basis, depending on the expected amount of VAT to be paid and the reliability of an enterprise or its line of establishment. The VAT form must be submitted within one month of the declaration period. This rule is maintained strictly and fines are high. So, including processing time at both the tax department and Statistics Netherlands, it takes three months at the most before data are available. This is well within the twelve months allowed for compiling annual statistics."

15. Another advantage of using fiscal data for structural business statistics is related to the reduction of volatility of these types of data. A recent study carried out by the United Kingdom Office for National Statistics (*Jones, G., 2000*), states that, "One of the problems of these turnover inquiries has been the volatility of the results and this is the reason why some have not been used in the estimation of gross domestic product (GDP). While there are several causes of this volatility, it is clear that a larger sample size would be desirable as one of the remedies. This however would have major implications in terms of cost and also for the burden on businesses. It is for these reasons that the present study has been set up. It is possible that a considerable reduction in the existing cost and burden of the turnover inquiries could be achieved by using administrative data to either supplement or replace survey data. At the same time, the volatility of the results might actually be reduced as a consequence of the effectively very large sample size of administrative data".

16. These references to the advantages of using fiscal sources must not conceal the fact that there are also disadvantages. As in other areas in which there has been experience of the statistical use of administrative records, there are obviously not only advantages but also limitations. Reference will be made in the following epigraphs to some that are especially relevant to this case but there are two general limitations that should be borne in mind:

- The administrative data are designed to measure the variables needed for management and for complying with regulations. These variables are not necessarily the best statistical approach to those normally used in analysis so it is necessary to precisely define the variables investigated as their names do not always tally with the definitions.
- One of the most serious problems affecting administrative data is inconsistency over time. The most relevant cases, specially in fiscal policies that are often redefined, are linked to legal changes that might affect the person to whom information is to be supplied and/or what information should be given and how.

17. In the case of tax records, specific limitations arise when compared with other records based on statistical operations (such as the structural business

surveys carried out annually by NSOs in a large number of countries, including those considered in the drafting of this Report). Basically, such limitations relate to:

- Lack of standardisation between reporting units in tax declarations and those in structural business surveys.
- Differing definitions in some cases.
- Quality of the associated activity code.

The following epigraphs refer to these three limitations.

18. As stated in the above-mentioned study (*Jones, G., 2000*), “A single legal unit on the business register may be one of several types (e.g. company, partnership etc.). An enterprise is defined as a combination of one or more legal units which act together as a single entity for accounting purposes. A reporting unit on the business register is usually a complete enterprise (“an enterprise reporter”).

The VAT system deals with three types of reporting unit. The first type is a single legal unit. The second is a group of legal units (“a VAT group”). Within a VAT group there will be one legal unit which reports for the whole of the group (a group representative or “rep”). Other members of the VAT group are known as non-reps. The third category of VAT reporting unit is a division of a company.”

19. A recurring characteristic in all the cases analysed for this Report is that the variables analysed are not always defined in the same way in structural business surveys and for the various taxes. The case of sales is paradigmatic and it has always been emphasised that turnover⁹ is used as a proxy for sales. (According to VAT, turnover includes proceeds from the sale of tangibles and intangible capital assets (like land) whereas NSO surveys excludes these from turnover. The study carried out in the United Kingdom in 1999 (*Jones, G., 2000*) to evaluate the importance of these definitional differences observed that, “The total all-industries turnover over the 3 year period 1997-1999 was compared between VAT and business survey sources. The differences found were small, with the VAT figure slightly higher than the business inquiry one. This difference needs to be taken into account in a mixed VAT/survey system but is not a major problem”.

20. Another limitation that has been mentioned when fiscal sources are used for statistical purposes is the fact that there are differences in the economic activity codes assigned to the same reporting units in the Business Register

⁹ Although there is currently no universal definition of the concept of “turnover”, the nearest thing to a standard is the definition included in the European Union Legislation on structural business statistics which define turnover as “the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT and other similar deductible taxes. It also includes all other charges (transport, packaging, etc.) passed on to the customer, even if these charges are listed separately in the invoice. Income classified as other operating income, financial income and extraordinary income in company accounts is excluded from turnover. Subsidies are also excluded.” (*see Annex 3, 120 “Turnover”*).

(BR) and the corresponding fiscal source used. These may be because different systems are used for assignation (either declaration by the company itself or through outside initiative involving NSO staff or the Tax Administration) and also because there is no strict, complete link between the economic activity codes of ISIC Economic Classifications and the codes assigned by the Tax Administration. Experience on processes to create Business Registers shows that it should be the NSO, which is responsible for maintaining such Registers, that should validate assignation of the codes (both when it assigns them directly and when it determines the criteria for assignation by other Units). This is anyway the clear responsibility of the NSOs since they are the custodians of the General Statistics System in all countries.

21. In this regard, different examples may be mentioned. Once again, in the English case (*Jones, G., 2000*), there are “significant differences in industry classification between Customs and Excise (C&E) and the NSO business register. These differences are partly caused by differences in reporting unit structures, but even where reporting units match differences in classification still exist. Table below shows that about 70% of register reporting units have matching classifications at the 4 digit industry level. However these tend to be the smaller businesses and account for only about half of total register employment or turnover. Analyses show that there is some improvement in these percentages if evaluated at 3 digit or 2 digit industry level (as might be expected). Also, where reporting unit structures match, the degree of agreement of classification is better than the average figures quoted here.”

Comparison of C&E with NSO industry classifications						
	Number of RUs	% of RUs	Register employ't	% of employ't	Register turnover	% of turnover
Different 4 digit industry	628,643	30.1	12,051,821	46.6	1,880,812	46.4
Same 4 digit industry	1,456,604	69.9	13,808,569	53.4	2,168,316	53.6

22. It is true that these three types of limitation associated with the matching of administrative and statistical records in Business Registers exist. There should therefore be some type of control to check how relevant they are for statistical purposes. An empirical example was carried out in the Netherlands (*Braaksma, B., et al, 2000*) for all the companies registered in 1996 for the Business Register and VAT. “All active enterprises, with and without corporate capacity, are subject to VAT regulations. The former group consists mainly of limited liability companies, the latter of privately owned companies and unlimited partnerships. In theory, our entire population should be covered by the VAT source, and thus in theory we should have complete turnover information at our disposal. Unfortunately, in practice the situation is less ideal. From our BR population of 83,521 enterprises in 1996:

- 2% (1,362 enterprises) cannot be matched to the tax register because the structure of the enterprise is too complicated to fit the matching algorithm.
- 21% (17,392 enterprises) cannot be matched to the tax register because no corresponding fiscal unit can be found. The larger part of this group

consists of enterprises that are probably not active and have therefore been eliminated from the tax register.

- 2% (1,870 enterprises) cannot be matched due to an omission in the matching algorithm, which ‘overlooks’ these enterprises.
- 14% (11,921 enterprises) can be matched to the tax register, but for one reason or another do not yield declarations. This happens for example when the tax liability is shared with, or transferred to, another enterprise in an enterprise group, and also when the enterprise is exempt from VAT. There are a number of regulations for exemption for specific situations, for example for agricultural enterprises, very small enterprises, and foreign enterprises.
- 9% (7,763 enterprises) can be matched to the tax register, but do not declare a positive turnover. We have reason to believe that for some of these enterprises the turnover is not really zero.”

23. “Note that categories 1 and 3 relate to problems on ‘our’ side of the matching, category 2 relates to the matching itself and categories 4 and 5 concern complications in the VAT source. All in all, for just over half of the enterprises (52%, 43,303 enterprises) we obtain quantitative turnover information. We will refer to this part of our target population as the VAT declaration enterprises. For the remainder of the population we have, however, qualitative information: a coding system with 14 different codes yields information on the reason why quantitative information is lacking. We will refer this part of our target population as the VAT code enterprises.¹⁰ Combination of both the quantitative and qualitative information yields complete coverage of the population.”

¹⁰ Note that this identification of “VAT declaration enterprises” and of “VAT code enterprises” is another example of segmentation of the universe of reporting units. In section B. (“Business Demography, a new statistical field”), special mention will be made of this aspect of use of tax sources with regard to greater coverage of reporting units and, consequently, of the possibilities of more powerful segmentation of the universe of these (business) units.

II. TAX SOURCES AND TOURISM INDUSTRIES: STRUCTURAL APPROACH

A. Tax sources and Business Register: the 1995 expansion

24. As mentioned by Statistics Finland (*Laaksonen, 2001*), High-quality Business Register (BR) is the heart of business statistics and business data analysis. BR provides a sampling frame for structural and sub-annual surveys, and not just a frame, but a tool for the preparation and coordination of surveys and for grossing up the results. BRs are also a tool for producing statistics of business population and demography. BRs can be seen, also, as the natural place for linking and integrating tax and survey microdata. And, as the French experience illustrates, BR can be also a source of administrative and informative services to enterprises, specially, small and medium enterprises.

25. The key role of tax and social security registers in the development of high-quality Business Registers can be seen in the experience of most developed countries in which fiscal sources usually provide almost exhaustive coverage of the units involved. In the United States, France and Nordic countries, statistics offices have been using tax registers for decades, but in most European countries the process is more recent and has been speeding up since 1995. In that year Spain presents DIRCE, which integrates tax register (VAT and labour income withholding) and social security register (employers). Also in 1995 United Kingdom presents the Inter- Departmental Business Register (IDNR) - It is a list of United Kingdom businesses maintained by National Statistics (NS) and combines the former Central Statistical Office (CSO) VAT based business register and the former Employment Department (ED) employment statistics system based on PAYE (Pay as You Earn) scheme. Both Spain and United Kingdom BRs comply with European Union regulation 2186/93 on harmonisation of business registers for statistical purposes. Also in 1995 Netherlands, Denmark and other European countries show important advances in the quality and coverage of their Business Register.

26. Eurostat has seen the centralised Business Register to be so important that a special regulation (*Council Regulation (EC) No 2186/93, 1993*) was given up in 1993 encouraging the use of tax records for this purpose through this legislative act of the European Parliament. In the case of the EU (*Eurostat, 1999*), the use of fiscal sources by Member States to improve BRs has been promoted not only by statistical considerations but also by the fact that the EU bases its income on the GDP of each Member State (MS) (*Council Directive (EC) No 89/130, 1989*) and on a VAT base that is measured using National Accounts data (*Council Regulation (EC) No 1553/89, 1989*). It therefore seems clear that both the Regulation on Business Registers of 1993 and the GDP exhaustivity programme of 1994 (*Commission Decision (EC) No 94/168, 1994*) meet the need to increase the reliability and comparability of Member State GDPs. These two regulations have forced NSOs to take an interest in fiscal records, not only to feed Business Registers but also to measure the hidden economy and tax evasion and include them in the GDP.

27. Recent development in exploiting administrative sources for business registers and business statistics is also in line with advances in information

technology; it was only in the nineties that it became possible to reap the full benefits of the census nature of many of the basic administrative sources for use in economic statistics.¹¹ Moreover, improved techniques for collection, processing and storing massive data sources are leading to a revolution in the visible analysis of data, not only in public statistics but also in companies in which it is taking the form of datawarehousing or IT systems for decision-making.

28. In some UE member states, as in Nordic countries, the United Kingdom and the Netherlands, there are projects to develop a Single Business Register as a means to help effective communication between businesses and government and to achieve better co-ordination between government bodies and more efficient operation of government services. The project for the reorganisation of basic records used by Dutch citizens (such as the Social Security Register, the National Cadastral Register, the Municipal Register, the 1:10.000 topographical map, etc.), states (*Born, R., et al, 1999*) that one of its key objectives is to “improve Government’s performance”.¹²

29. In non-European countries such as Australia, Canada, the United States and New Zealand, great progress was made in the late 1990s in improving the quality of Business Registers and in the statistical use of fiscal data, strengthening collaboration between the statistics and fiscal administrations. In all cases, the emphasis was on the integration of fiscal sources and economic surveys. In the words of the Director of the Australian Bureau of Statistics (ABS) (*Trewin, D., 2002*), “The ABS uses efficient survey designs to minimise sample sizes and hence total reporting load; we also control selection across collections to spread the load more equitably. To take advantage of the current reforms of the Australia taxation system, the ABS is seeking every opportunity to improve the efficiency of our sample designs, and to use taxation data as a substitute for some of the data now gathered through direct collections. We have started the process of simplifying the business unit structure used in our surveys to make it consistent with the structure used for taxation purposes.”

30. Although this Report has focused on the country level, we believe that it is worthwhile to point out Canada’s experience in the development of the PIPES project, designed to improve the quality of its provincial economic statistics and carried out by Statistics Canada. The project’s goal (*Bisset, P., 2002*) is to implement a full-scale system of annual economic statistics by province, consisting of business and household surveys combined with data derived from tax and other administrative data sources.

¹¹ France’s case is admirable in many respects. Since the 1950s, the INSEE has been receiving information such as tax, salary, and employment microdata, as well as company accounts. However, it was only in the 1990s and thanks to advances in information technology that it stopped processing samples of the DADS form (“Annual declaration of wages and employees”), and began to exhaustively exploit this source of tax information.

¹² It seems only fair to recall that as early as 1973, Aukrust and Nordboten of Norway published a paper in which they predicted a world without censuses, as all the necessary information would be contained in a statistical file system that could be characterized as a set of basic censuses (population, businesses and establishments, homes and property). Basically, it could be said that today this prediction has come true in the Nordic countries.

B. Business Demography, a new statistical field

31. Birth and death of enterprises, survival and growth of existing ones, changes from unincorporated to incorporated business, fusion-fission of enterprises...; these and other related processes are the content of Business Demography, a new statistical field now developing based on Business Registers. The needs for data on business demography stems, not only from statistical offices but also, as *Hult (2001)* states, from policies aimed at developing conditions that facilitate the creation of new enterprises and enhance the possibilities of growth of existing ones in order to create more and better jobs.

32. In the case of Construction, Retail commerce, Accommodation and other services with a large number of unincorporated (sole-proprietorships and partnerships) and non-employing enterprises, the first and more basic contribution of tax registers to Business Demography is the better knowledge of the structure and dimension of enterprise population and, in special, of the unincorporated and non-employing subpopulation.

33. In this section, you'll find some recent examples of the contribution of tax registers to the knowledge of Business Demography. Australian Bureau of Statistics (ABS) and US Bureau of Census have been using, at least from 1997, income tax registers to identify non-employing enterprises not included in the Social Security (employers) registers. Spain's Institute of Fiscal Studies published from 1989 to 1996 annual business statistics based on VAT and income tax withholding annual returns which show detailed breakdown of turnover by activity in tourist industries.

1. Australian Business Register includes non-employing businesses

34. The attached table for Australia (*ABS, 1999*) shows how tax sources can identify not just small and medium enterprises but also non-employing businesses.¹³

¹³ The changes associated with The New Tax System made as from 2000 consider these as business units and therefore includes them in BRs. This improvement in Australia's statistical infrastructure was the result of an analysis carried out for selected industries (including some tourism characteristic industries such as "Accommodation, cafés and restaurants", "Transport and storage" and "Cultural and recreational services") in 1994-95 and 1995-96 using business income tax files.

SUMMARY OF DATA SOURCES

Selected industries				
Type of business	Large businesses	Complex small & medium employing businesses	Simple small & medium employing businesses	Non-employing businesses
The source used to identify businesses of each type	ABS Business Register	ABS Business Register	ABS Business Register	ATO income tax files
The number of each type of businesses	3 000	92 000	449 000	933 000
The number of businesses that are selected to provide data	3 000	2 000	81 000	933 000
Source of data	ABS survey	ABS survey	ATO business income tax returns(a)	ATO business income tax returns
Contribution to total business income for service industries	33%	13%	47%	7%

(a) Approximately 8,000 of these businesses also receive an EAS survey form.

Source: ABS, unpublished data, Economic Activity Survey, 1995-96; ATO, Business Income Tax Files, 1995-96

35. There are three aspects which are especially significant in these tables and that are mentioned explicitly in the referred document:

- “While non-employing businesses are quite numerous, their overall contribution to the economic activity of selected industries, in terms of operating income, is only around 7%;
- As well as being significant contributors to the overall level of economic activity in some industries, non-employing businesses are sometimes a major influence on the changes from year to year in the performance of many industries. While operating income for employing businesses in the selected industries increased by 9% between 1994–95 and 1995–96, operating income for non-employing businesses only increased by 2.5%;
- While some of the movement between the years can be attributed to non-employing businesses moving into the employing category, and vice versa, the changes in the fortunes of non-employers between 1994–95 and 1995–96 indicate that non-employers can have significant impact on overall industry growth rates. The effects of higher entry and exit rates among non-employing businesses and relatively higher volatility in their respective fortunes from year to year combine to produce patterns sometimes significantly different from that experienced by employing businesses.”

36. “This suggests that a longstanding assumption in compiling economic statistics, that the performance of non-employing businesses was highly correlated with the performance of employing businesses through the business cycle, may not be appropriate. Through the expanded use of Australian Taxation Office (ATO) data described in this publication, the ABS and its clients have access to a regular and relatively reliable source of information to monitor the changing contribution of this significant sector of the Australian economy.”

2. *United States Bureau of Census non-employer and single/multiunit components*

37. The United States Bureau of Census (*King, C., et al, 2002*) “conducts annual surveys of the retail, wholesale, and service sectors, as defined by the 1997 North American Industry Classification System (NAICS). These surveys measure totals and trends that are important to the United States economy. Through the Annual Retail Trade Survey (ARTS) and the Annual Trade Survey (ATS), we collect data such as sales, end-of-year inventory, and value of purchases for retail and wholesale industries. The Service Annual Survey (SAS) collects revenue data, as well as data specific to particular service industries. Estimates from the ARTS and ATS serve as benchmarks for the Monthly Retail Trade Survey and the Monthly Wholesale Trade Survey, respectively.”

38. “The samples for these annual surveys consist of three components:

- The *certainty component* consists of self-representing companies that were given a sampling weight of one because these sampling units were expected to have a large effect on the precision of the estimates. These companies are comprised of one or more *establishments*, where an establishment is the smallest business unit at which transactions take place and payroll and employment records are kept.
- The *non-certainty component* consists of a sample of Employer Identification Numbers (EINs) associated with companies not included in the certainty component. For a given company with paid employees, the Internal Revenue Service (IRS) issues one or more EINs for tax filing and reporting purposes. Thus, a given EIN is an aggregation of establishments and represents a particular part of its parent company. We refer to two types of EIN sampling units – *single unit EINs* and *multiunit EINs*. A single unit EIN is associated with a company comprised of *only one* establishment, while a multiunit EIN is associated with a company comprised of *more than one* establishment.
- The *non-employer component* consists of firms with no paid employees. Data from this component are obtained from administrative records (IRS tax returns) and are identified and tabulated only for retail and service industries.”

39. The case of U.S. Bureau of Census is especially interesting (*Burton, J., et al, 1998*). “Even though we have used administrative record data in many ways for a long time, we continue to search for ways to improve our statistical programs in terms of reduced burden on the business community and more efficient use of resources, while at the same time expanding the coverage and quality of our statistical products. Thus, the primary focus of our recent research in the administrative record area has been to identify and assess the impact of expanded uses of administrative records for our programs. More specifically, we have been looking for additional ways to use administrative record data in lieu of mailing a report form in our annual surveys of retail and wholesale trades, as well as those in the services industries. This paper focuses on our investigation and evaluation of this increased use of administrative record data.”

3. *Spain's detailed breakdown of tourism industries*

40. We have also been able to identify a useful example which refers to the different way in which economic activities are broken down for the seven large headings for Tourism characteristic industries in the case of Spain. The first two columns of the attached table identify the appropriate codes in terms of the ISIC Rev3 and the NACE Rev1 and the last two, the breakdown of activities used in structural business surveys for services and by the Spain's Fiscal Administration. This example illustrate the potential of using tax sources for analysing the economic impact of tourism in that they are both exhaustive and give a more detailed view of many economic activities because of the requirements of tax management.

BREAKDOWN BY SECTOR OF TOURISM INDUSTRIES IN THE STRUCTURAL BUSINESS SURVEYS AND FISCAL SOURCES

	CIU Rev 3 (1)	NACE Rev 1 (2)	Annual survey on Services		Tax on Economic Activities (IAE) (3)	
Hotels and similar	5510	55.1 and 55.2	55.1 55.2	Hotels and boarding houses. Campsites and other types of accommodation.	1681 1682 1683 1684 1685 1686 1687 19422 252	Accommodation in hotels and motels. Accommodation in boarding houses and hostels. Accommodation in guesthouses and rural tourism accommodation Accommodation in serviced apartments. Non-hotel tourism accommodation. Utilisation of private apartments through agencies or organised companies. Tourism campsites. Spas. Accommodation specialists.
Second homes as property (rent imputed)	7010*	70.1*				
Restaurants and similar	5520	55.3, 55.3 and 55.4	55.3 55.4 55.5	Restaurants. Drinks establishments. Canteens and catering.	1671 1672 1673 1674 1675 1676 1677	Restaurant services. In snack bars In cafés and bars, with and without food. Special services in restaurants, cafeterias and café-bars. Services in kiosks, stands, stalls and similar. Services in chocolate bars, ice-cream parlours and similar. Services provided by establishments classified under numbers 1671, 1672, 1673, 1681 and 1682.
Passenger transport by rail	6010*	60.1	60.1	Rail transport.	17111 17121	Passenger transport by normal rail. Passenger transport by narrow rail.
Passenger transport by road	6021* and 6022*	60.21*, 60.22* and 60.23*	60.211 60.212, 60.313, 60.214, 60.23 60.22	Metro. Urban and inter-urban transport by bus. Transport by taxi.	17213 1729	Passenger transport by road. Other land transport (nec)
Passenger transport by sea	6110* and 6120*	61	61*	Passenger transport by sea.	17311 17331 17334	International passenger transport by sea. Passenger transport by cabotage and on internal waterways Passenger transport by sea by jet-foil and similar.
Passenger transport by air	6210* and 6220*	62.1* and 62.2*	62*	Passenger transport by air.	17411 17413 17421 17423	Domestic passenger transport by air (regular services). International passenger transport by air (regular services). Domestic passenger transport by air (non-regular services). International passenger transport by air (non-regular services).
Services relating to passenger transport	6303*	63.2	63.2	Other activities relating to transport	17514 1753	Operation of toll motorways, roads, bridges and tunnels. Activities relating to air transport.
Rental of capital goods for passenger transport		71.1* and 71.2*	711, 712	Rental of means of transport.	1854 1855	Self-drive car hire. Rental of other means of transport.
Travel agencies and similar	6304	63.3	63.3	Travel agencies.	1755 2882 2883	Travel agencies. Tourist guides. Tourism interpretation guides.
Cultural services	9232 and 9233	92.5 and 92.3*, 92.6*, 92.7*			1966	Libraries, archives, museums, botanical gardens and zoos.
Services for sports activities and other recreational activities	9214*, 9241*, 9219* and 9249*				1965	Entertainment (excluding cinema and sports).
					1968 1981 1989 285	Sports entertainment Gardens, recreational, amusement and aqua parks and skating rinks Other activities relating to entertainment and tourism; organisation of congresses; parks and trade fair centres. Entertainment professionals

(1) Uniform International Industrial Classification of economic activities. First two levels tie in with NACE Rev 1.

(2) Domestic Classification of Economic Activities in 1993. Ties in with NACE Rev 1 up to the fourth digit.

(3) Tax on Economic Activities. Sectorial classification of the Spanish Tax Administration.

(*) The asterisk indicates that there is only a link for part of the heading.

C. Some examples on structural statistics and tax data

41. The previous section described the power of fiscal records for finding details on business populations in tourism industries illustrated with the experiences in Australia, the United States and Spain. In this section, we shall illustrate the wealth of information to be found in tax declarations in Spain and Australia, and special mention will be given to the recent experience in Netherlands.

42. When drawing up this Report we noted that the capacity for integrating fiscal information is a characteristic that exists in most countries having a developed tax infrastructure. But the situation differs greatly between Spain, where the Tax Office deals with VAT and Income Tax, and the United Kingdom, where Customs & Excise deals with VAT and the Inland Revenue with Income Tax. In the case of Spain and other countries, there is a Tax Identification Number, or its equivalent (such as the “Business Number” in Canada), which is applied by companies in all their tax relations with the National Authorities and can be used as a factor for integrating the different types of data declared by a single company (such as total sales, exports, total salaries, wages and other payments, etc.). It also allows analysis over time.

43. This capacity for integration is especially important in two specific areas:

- In terms of coverage of the fiscal data to be used for analysis. Not all producers have to file VAT reports: there is a minimal limit, which can mean the exclusion of many small units not fulfilling the minimum level of taxation, the importance of which is rightly very low at the global level, but might be significant in some poor rural communities or in activities such as hotels and restaurants;
- In terms of the analytical variables. For example, business income tax data provides information for a wider range of items than VAT data.

1. *Spain’s experience linking VAT & Labour Income Withholding*

44. With regard to the integration of economic information supplied under different tax figures, Spain’s Fiscal Administration (more precisely, the “Instituto de Estudios Fiscales”) has produced yearly statistics based purely on fiscal data, covering the period 1989-1995 in three different statistical products: a Business Statistics, a Statistics of Company Accounts (Incorporated Firms) and a Statistics of Employers/Employees (*Enterria, P. et al, 2002*). Data on variables such as: number of salaried and retired persons, number of unincorporated enterprises, value added, turnover, exports, imports, wages, etc have been derived from different fiscal sources such as the VAT, Personal Income Tax, Corporate Income Tax and the Economic Activity Tax.

45. The following table is of special interest because it allows the identification of some economic aggregates in selected tourism industries according to

different size and type of companies. This table summarizes the main statistical use made so far of fiscal sources, namely, the integration of the following two:

(1) Value Added Tax (annual form)

This is an annual summary that is presented to the Administration at the same time as the declaration for the last period of the year is given in. All taxpayers who have made periodic declarations during the year are obliged to present the annual summary. This form enables taxpayers to inform the Administration of the annual data on all their operations, whether or not they are subject to VAT, and of any tax obligations arising from them. The figures given in this form should be the same as the sum of the data presented during the year.

Use of this form gives variables for internal sales, exports and imports, but it also includes many other variables of interest, such as current and capital purchases, or sales of assets.

(2) Income and professional activities tax (annual form)

This form can be used to identify persons who have received earnings subject to deductions during the year and those who have carried out the deductions periodically during the year. The latter are obliged to present this declaration.

This form gives information on wage earnings and the average annual number of workers who have worked for the company presenting the declaration.

HOTELS, RESTAURANTS AND TRANSPORT IN 1995 (*)

Companies and basic economic aggregates by size

	Type of companies				Economic aggregates				
	Unincorporated firms	Corporations	PPAA and PN-PI	TOTAL	Sales (million €)	Exports (million €)	Imports (million €)	Employees	Wages (million €)
RESTAURANTS									
No employees	128,715	3,744	784	133,243	2,692	1	3	0	0
From 1 to 10	64,962	16,008	157	81,127	4,945	4	16	215,576	1,072
From 11 to 50	1,850	3,951	28	5,829	2,653	11	20	103,393	655
From 50 to 100	16	268	5	289	504	2	1	19,407	129
From 100 to 250	2	110	1	113	360	0	3	16,790	108
Over 250	0	52	1	53	833	44	8	31,784	242
Total	195,545	24,133	976	220,654	11,988	61	51	386,950	2,205
%	88.6	10.9	0.4	100.0					
HOTELS									
No employees	7,848	904	47	8,799	234	3	0	0	0
From 1 to 10	3,128	1,777	109	5,014	446	0	3	17,610	91
From 11 to 50	391	1,773	38	2,202	1,414	0	3	50,173	354
From 50 to 100	9	398	4	411	943	1	1	28,322	236
From 100 to 250	2	200	1	203	998	1	3	30,891	289
Over 250	0	48	2	50	1,126	0	5	36,787	377
Total	11,378	5,100	201	16,679	5,161	5	15	163,783	1,348
%	68.2	30.6	1.2	100.0					
LAND TRANSPORT									
No employees	135,996	2,007	67	138,070	3,130	3	3	0	0
From 1 to 10	24,852	10,087	31	34,970	3,633	29	14	73,662	608
From 11 to 50	256	2,563	14	2,833	3,452	87	32	55,127	665
From 50 to 100	9	210	10	229	995	27	6	15,881	225
From 100 to 250	0	71	8	79	816	16	4	12,207	179
Over 250	0	49	6	55	2,636	7	57	95,095	1,658
Total	161,113	14,987	136	176,236	14,663	168	116	251,972	3,336
%	91.4	8.5	0.1	100.0					
AIR AND WATER TRANSPORT									
No employees	190	83	3	276	16	0	1	0	0
From 1 to 10	59	136	1	196	52	4	1	632	7
From 11 to 50	7	81	3	91	171	10	8	2,030	31
From 50 to 100	0	15	0	15	243	3	9	1,029	33
From 100 to 250	0	16	0	16	367	8	22	2,667	65
Over 250	0	16	1	17	4,444	197	430	46,874	1,240
Total	256	347	8	611	5,293	221	471	53,232	1,375
%	41.9	56.8	1.3	100.0					
SUPPORTING AND AUXILIARY TRANSPORT ACTIVITIES									
No employees	4,417	1,362	45	5,824	330	5	7	0	0
From 1 to 10	1,747	5,927	25	7,699	2,533	64	56	26,420	296
From 11 to 50	67	1,483	19	1,569	3,065	64	69	31,770	437
From 50 to 100	2	178	4	184	1,779	35	56	12,593	196
From 100 to 250	0	90	2	92	1,248	7	20	14,255	227
Over 250	0	55	0	55	2,103	26	37	27,284	441
Total	6,233	9,095	95	15,423	11,058	201	246	112,322	1,597
%	40.4	59.0	0.6	100.0					
TOTAL SERVICES									
No employees	1,360,145	138,772	13,960	1,512,877	53,379	1,810	3,080	0	0
From 1 to 10	338,670	315,776	7,871	662,317	129,807	3,863	8,039	1,950,806	15,608
From 11 to 50	11,773	91,307	3,160	106,240	161,502	7,903	14,764	2,123,670	21,105
From 50 to 100	343	9,270	874	10,487	60,396	5,020	7,240	720,777	8,057
From 100 to 250	84	4,676	721	5,481	75,824	9,018	10,164	838,808	10,186
Over 250	6	2,421	566	2,993	275,787	35,463	39,507	3,183,607	51,923
Total	1,711,021	562,222	27,152	2,300,395	756,695	63,076	82,795	8,817,668	106,879
%	74.4	24.4	1.2	100.0					

(*) Instituto de Estudios Fiscales y Agencia Tributaria: *Las empresas españolas en las fuentes tributarias*.

Figures do not cover the Canary Islands, Ceuta, Melilla, the Basque Country and Navarre.

2. *Australia's accurate presentation of Business Input Costs*

46. The second example refers to Australian Bureau of Statistics (ABS) and the supplementation of the relatively small scale survey the ABS conducts in respect of selected industries with business income tax data provided by the Australian Taxation Office (ATO). Selected industries includes Construction, Wholesale and Retail Trade, Accommodation, cafes and restaurants and other services. As in (ABS, 1999), "Statistics for these industries have been improved, in three ways:

- Extending the coverage to include the non-employing business sector.
- Improving the quality of data available regarding small and medium employing business.
- Achieving production of a much finer dissection of business input costs by data item and industry than has been feasible in the past.

To achieve comparable improvements without the use of income tax data would have cost many million of dollars and imposed an additional statistical reporting burden on businesses totalling some 142,000 hours per year or a increase of around 22% on the current level of reporting burden."

47. "Data for 38 expense items are collected from around 3,200 businesses included in the ABS' annual Economic Activity Survey (EAS) collections. The strong correlation that exists between data items collected from this sample of businesses and those data items available from business income tax records, means that the data collected from the much larger ATO sample can be used to improve accuracy of the estimates for many of the data items of interest.

All businesses utilise a combination of labour, capital, and goods and services provided by other businesses to produce their outputs. While similar usage patterns tend to exist within industries, there are some significant differences across industries, as the data in the table clearly show."

You will find three examples of tourism industries that illustrate these differences in the following table.

DETAILS OF OPERATING EXPENSES, BY INDUSTRY—1995–96

	<i>Accommodation, cafes and restaurants</i>		<i>Transport and storage</i>		<i>Cultural and Recreational services</i>	
	<i>\$m</i>	<i>%</i>	<i>\$m</i>	<i>%</i>	<i>\$m</i>	<i>%</i>
Wages and salaries	6 245	23.2	11453	19.9	3244	18.1
Superannuation	355	1.3	930	1.6	245	1.4
Workers' compensation costs	140	0.5	549	1.0	56	0.3
Payroll tax	175	0.7	776	1.3	158	0.9
Fringe benefits tax	23	0.1	176	0.3	64	0.4
Staff training expenses	30	0.1	108	0.2	28	0.2
Labour costs	6 968	25.9	13 992	24.3	3 795	21.2
Purchase of finished goods	6 932	25.7	1323	2.3	1435	8.0
Purchase of materials	2 583	9.6	4073	7.1	630	3.5
Petroleum products expenses	515	1.9	3003	5.2	100	0.6
Electricity and gas expenses	666	2.5	427	0.7	259	1.4
Other fuels expenses	12	0.0	318	0.6	2	0.0
Purchases of goods, etc	10 708	39.7	9144	15.9	2 426	13.5
Rent—land, buildings and other structures	1 202	4.5	1547	2.7	657	3.7
Rent—motor vehicles	42	0.2	790	1.4	55	0.3
Rent—other expenses	66	0.2	1011	1.8	475	2.7
Rent, leasing & hiring expenses	1 310	4.9	3348	5.8	1 187	6.6
Depreciation	1 020	3.8	3615	6.3	928	5.2
Bad debts	12	0.0	58	0.1	33	0.2
Interest expenses	997	3.7	1745	3.0	477	2.7
Bank charges other than interest	156	0.6	189	0.3	85	0.5
Insurance premiums	207	0.8	601	1.0	121	0.7
Financial expenses	1 372	5.1	2593	4.5	717	4.0
Motor vehicle running expenses	190	0.7	3061	5.3	254	1.4
Postal expenses	42	0.2	205	0.4	64	0.4
Telecommunication services	225	0.8	725	1.3	335	1.9
Postal & telecommunication expenses	267	1.0	930	1.6	399	2.2
Advertising expenses	558	2.1	739	1.3	545	3.0
Freight and cartage expenses	75	0.3	6245	10.8	75	0.4
Commission expenses on own materials	13	0.0	1025	1.8	174	1.0
Repair and maintenance expenses	583	2.2	1725	3.0	388	2.2
Other management and administrative Expenses	263	1.0	475	0.8	208	1.2
Travel and accommodation	324	1.2	569	1.0	286	1.6
Sales commission expenses	202	0.8	2057	3.6	933	5.2
Paper, printing and stationery expenses	126	0.5	280	0.5	203	1.1
Audit and other accounting expenses	114	0.4	163	0.3	80	0.4
Cleaning expenses	284	1.1	375	0.7	94	0.5
Royalties expenses	54	0.2	33	0.1	581	3.2
Land tax and rates	241	0.9	93	0.2	115	0.6
Legal expenses	24	0.1	81	0.1	86	0.5
Data processing expenses	11	0.0	106	0.2	21	0.1
Other expenses	2 240	8.3	6928	12.0	4412	24.6
Total expenses	26 950	100.0	57 577	100.0	17 907	100.0

Source: ABS, *Business Operations and Industry Performance, Australia, 1995-96* (ABS Cat. no. 8140.0); and ATO, *Business Income Tax Files*.

3. *Spain's example of Balance sheet and Profit and Loss account data in the Accommodation industry by business size*

48. The third example is also taken from Spain and takes the form of a table giving information on Corporation Tax in Hotels and Restaurants. In Spain, this tax provides information on a number of variables including the Profit and Loss Account and the balance sheet of companies but, most originally, this information can be associated with company size.

CORPORATION INCOME TAX DATA IN ACCOMODATION, CAFES AND RESTAURANTS INDUSTRY, 1991 (*)
Breakdown by size of enterprise ()**

	Total	No employees	Micro	Small and medium	Big
Demographic variables					
Number of corporations (N)	14,166	1,348	6,444	5,795	579
Number of employees (EMPL)	361,369		31,961	170,730	158,678
Assets (€ millions)					
Tangible Fixed Assets (TFA)	6,152	501	744	2,606	2,302
Intangible Fixed Assets (IFA)	434	17	66	154	197
Equity (E)	3,423	331	431	1,317	1,344
Profit and Loss Accounts (€ millions)					
Output (O)	7,484	78	790	3,530	3,086
Value Added (VA)	3,314	35	275	1,504	1,500
Labour Costs (LC)	2,571	0	197	1,144	1,230
Gross Operating Result (GOR)	744	35	78	360	271
Net Operating Result	313	15	37	178	82
Net Financial Charges	-437	-21	-45	-195	-176
Trading Result	-124	-6	-8	-16	-94
Net Result before Taxes (RbT)	-60	0	5	12	-78
Net Result after Taxes	-137	-2	-3	-27	-106
Economic ratios					
Value Added rate (VA/O) (%)	44.3	45.0	34.7	42.6	48.6
Gross Operating mark-up (GOR/O) (%)	9.9	66.0	10.2	10.5	9.1
Labour Costs rate (LC/VA) (%)	77.6		71.6	76.1	82.0
Productivity by employee (VA/EMPL) (€)	9,171		8,591	8,811	9,455
Average Cost by employee (LC/EMPL) (€)	7,114		6,154	6,702	7,749
Unit Labour Cost (LC/O) (%)	34.3		24.9	32.4	39.9
Capital-output rate (TFA+IFA)/VA	1.99	14.78	2.95	1.83	1.67
Apparent Interest Rate (1)	7.7	5.7	6.4	8.2	8.1
Economic profitability (2) (%)	4.0	2.7	3.7	5.2	3.2
Financial profitability (RbT/E) (%)	-1.8	0.0	1.2	1.0	-6.1
Financial ratios (%)					
Cash ratio (3)	61.9	77.6	58.9	62.9	59.8
Working capital ratio (4)	-21.4	-8.3	-26.4	-19.9	-24.3
Liquidity ratio (5)	75.7	89.2	86.0	79.5	67.0
Debt ratio (6)	213.8	151.5	211.4	220.7	223.5

(*) Instituto de Estudios Fiscales y Agencia Tributaria: *Las Cuentas de las Sociedades en las fuentes tributarias*.

Data don't include the Basque Country and Navarre.

(**) Micro: up to 10 employees; Small and medium: from 11 to 100 employees; Big: more than 100 employees.

(1) Financial Expenses over Short and Long-term Creditors (Creditors without cost included).

(2) Trading Result and Financial Expenses over Assets.

(3) Available Assets over Short-term Creditors.

(4) Working Capital (Current Assets minus Short-term Creditors) over Fixed Liabilities (Equity and Long-term Creditors).

(5) Current Assets over Short-term Creditors.

(6) Short and Long-term Creditors over Equity.

4. *Netherlands experience linking VAT & Corporation Income Tax*

49. The last example refers to Statistics Netherlands and the new possibilities open by the Statistics Act of 1996, which gives the statistical office a new power to seek access to fiscal data. From 1997 onwards Statistics Netherlands is making extensive use of VAT data and Corporate tax data to compile structural business statistics on small wholesale trade enterprises (*Braaksma, B., et al, 2000*). For this population, the turnover total and the number of active enterprises are estimated from value added tax data, while the structure of their profit-and-loss accounts is determined from corporate tax data; it appears that the results from fiscal data compare rather well to traditional sample survey results.

The authors mention “three main reasons why Statistics Netherlands uses fiscal data instead of collecting its own survey data:

- Growing demands and diminishing resources.
- The policy of the Dutch government from 1997 onwards to help relieve the administrative burden for companies.
- The decreasing willingness of the part of enterprises to co-operate in the collection of data, even for surveys for which they are legally obliged to report.

Statistics Netherlands is planning to extend the use of fiscal data to other statistical areas. They are considering the use of VAT data to improve the monthly retail trade turnover statistics (an aspect considered in next chapter), as well, as the use of both VAT and corporate tax data to improve and augment the annual retail trade survey.”

III. USING VALUE ADDED TAX (VAT) DATA FOR DEVELOPING SHORT-TERM TOURISM STATISTICS

50. The newly created OECD Short-term Economic Statistics Expert Group (STESEG) has noted the introduction of output indicators (which in the case of services comprise indicators of turnover) by many OECD Member countries over the last few years (*OECD, 2002*). In fact, “although many countries compile indicators on selected services activities such as numbers of tourist arrivals and nights spent in hotels and other accommodation establishments, number of passengers transported by specific modes of transports, etc, they do not represent short-term indices from the perspective of analysing how the corresponding activities relates to the overall business cycle”. Moreover, output indicators for services (other than retail trade) are sparse and heterogeneous.¹⁴

51. In the specific case of tourism industries, it seems that some of the agreements reached by the Expert Group in its first meeting held in June 2002 are applicable:

- There should be an overall index of service production in addition to indicators for individual service categories.
- The monthly production indices should be complementary to quarterly and annual national accounts data.
- The most feasible proxy indicator of output or production would be turnover of service enterprises.

52. However, it is not clear whether in all OECD member countries the data obtained by economic surveys of companies allows the use of “turnover” for drawing up such indicators. European legislation (*Eurostat, 1999*) states that for some sections of NACE Rev.1, including all those that correspond to tourism industries,¹⁵ the variable to be used should be the number of persons employed and not turnover.

53. This is a very relevant limitation because the characteristics of employment in many tourism industries (such as marked seasonality and large numbers of part-time contracts) recommend the use of measures such as full-time equivalent employees for the purpose of analysing the economic impact of tourism (*OECD, 1999*). Additionally, not all labour associated with different tourism industries can be explained by the existence of tourism (that is, by the

¹⁴ The small number of OECD member countries that currently compile output indicators for services mostly use turnover as a proxy measure for output. Countries use a variety of sources for the compilation of the indicators –national accounts, surveys, administrative data-. Furthermore, there is enormous variation in the service activity coverage in different countries.

¹⁵ Annex D of Council Regulation (EC) No. 1165/98 of 19 May 1998 concerning short-term statistics only identifies the following tourism industries (see paragraph 5.):

- 55. Hotels and Restaurants
- 60. Land transport/transport via pipelines
- 61. Water transport
- 62. Air transport
- 63. Supporting and auxiliary transport activities/activities of travel agencies and tour operators

demand for goods and services on the part of visitors) so it would be necessary to use “tourism employment ratios” which mainly no country has as yet.

54. In consequence, when considering the possibility of promoting short-term tourism statistics in the general framework of the development of the services statistics currently being used by both the OECD and Eurostat, there are two main limitations:

- With regard to the international comparability of the quantitative indicators developed to date (amongst other reasons, because of the variables used and because not all of them follow the same criteria for its operationalization), and
- Because only a limited number of tourism industries are presently covered.

Because of their nature, it is clear that they can only be eliminated in the long term. This tallies with the statement made by the participants at the first meeting of the OECD Short-term Economic Statistics Expert Group held in Paris on 24-25 June 2002 as published by OECD (*OECD, 2002*).

“The issue of comparability was regarded as a key area of future work, though not perhaps in the normal context of the term. Comparability was regarded as having two broad dimensions, comparability over time and comparability between countries.

Of these, enhancing comparability of a series over time was believed to be of higher importance to users and an area of future work for STESEG.”

55. As mentioned in the Foreword, WTO/OMT is not currently considering possible international comparability of short-term statistics except for those that are published in the Compendium of Tourism Statistics (*WTO/OMT 2003*), namely the ones that support a worldwide comparability of the economic impact of tourism.¹⁶ Having said this, what we are trying is to initiate reflection in order to evaluate to what extent it would be reasonable to draw up general guidelines for promoting the use of fiscal sources regarding short-term tourism indicators (for which VAT –or other equivalent figures such as the GTS- would be the key source) and the application of business tendency surveys to tourism industries (referred in the next chapter).

56. Besides the examples mentioned in 12. and 49. (referred to United Kingdom and Netherlands, respectively) others can also be given (referring to Canada, France, New Zealand and Spain) to illustrate our conviction that VAT could be very useful for deriving monthly/quarterly turnover indicators, not only for services in general but also for tourism industries in particular.

¹⁶ See Annex 4.

A. Canada's new initiative using tax data to fill gaps in short-term statistics for service industries

57. Although Statistics Canada (*Lefrançois, B., 2002*) produces a wide variety of sub-annual economic indicators on industries and commodities, the Services Division carries out only a monthly survey, the *Monthly Restaurants, Caterers and Taverns Survey* (MRCTS). "The MRCTS is a sample survey that collects sales and receipts ¹⁷ and the number of locations from businesses in the Food Services and Drinking Places industry (NAICS 722). This sector is limited to businesses primarily engaged in serving food and beverages. It excludes food service activities that occur within establishments such as hotels, civic and social associations, amusement and recreation establishments. However, leased food service locations in such facilities are included. Establishments are classified into five kinds of business: full service restaurants, limited service restaurants, food service contractors, social and mobile caterers, and drinking places."

58. "The population and sample are updated monthly. The population consists of all businesses on our BR in that industry, excluding the deaths from the previous month; there are typically 56 000 such business locations in Canada. The population is stratified by province, kind of business, and annual revenues. The sample size is about 3 000."

59. "The estimates are based on the trends established for the survey month at the kind-of-business/province level. The results are published six weeks after the end of the reference month, with revisions to the previous month's results; they are not seasonally adjusted".

60. "In order to fill the gaps in short-term economic indicators for Services, work has started with Statistics Canada's Tax Data Division to produce sub-annual information from tax collection data for service industries where it does not exist. The tax data also have potential to reduce the response burden of monthly surveys on small establishments. For example, work is in progress to complement or replace the Monthly Restaurants, Caterers and Tavern Survey with estimates from the tax data."

61. It must be remembered that tax data uses have a long history at Statistics Canada. Since the early sixties administrative data have progressed from being simply a "tool" to help reduce response burden (primarily on small business) to becoming an integral data source for many important statistical programs. Much of the successful integration of these data sets is a direct result of the excellent cooperative relationship existing between Statistics Canada and Revenue Canada.

¹⁷ Sales are gross receipts from the sale of meals and lunches, alcoholic beverages, candy, souvenirs, hall or room rentals, fees for catering and bartending, and include proprietor's withdrawals of food and goods for personal use at selling price. Excluded are the provincial and federal sales taxes, as well as non-operating income such as service and carrying charges on credit accounts, bank interest and interest on investments, rent (real estate only) or bad debts recovered.

B. France's long term tradition on statistical use of tax data

62. The INSEE (*Fuger, M. et al, 2002*) has been using VAT declarations since 1976. Up to 1994, the General Tax Department gave a monthly sample based on a list of companies drawn up by the INSEE and, since 1995, it has had direct access to all declarations. However, only a sample of these is used for drawing up monthly indices (quarterly declarations are put on a monthly basis).

63. In 2002, the sample involved 23% of companies declaring in the Transport sector and 12% of those Services that were investigated. The breakdown used allows the identification of turnover in the following tourism activities:

- Transport (Passenger transport – excluding rail, Travel agencies, Air transport, Transport infrastructure management).
- Hotels and Restaurants (Tourism hotels, restaurants, cafés, catering, other catering services).

64. A special characteristic of these indices is that, in the case of “Retail trade” and “Hotels and Restaurants”, price indices are drawn up (for each of their components) in order to deflate the corresponding monetary aggregates.¹⁸

65. As can be seen in (*Eurostat, 1999*), INSEE has a long-established and extensive involvement in using tax sources for purposes of business statistics. INSEE manages the central business register (SIRENE) and the identification number it assigns to enterprises (SIREN) and establishments (SIRET) are legally required in all official transactions concerning businesses. Sources for SIRENE upkeep include monthly VAT files, annual accounting statements filed for tax purposes (BIC) and annual declaration of social data by employers for social security and income tax purposes (DADS). The BIC source and increasingly the DADS source are important contributors to structural business statistics. INSEE has also been involved in developing the General Accounting Plan that determines the form and content of business accounts.

C. New Zealand's first results expanding short-term indicator of sales and purchases in the service sector

66. Goods and Services Tax (GST) is a tax on the consumption of most goods and services in New Zealand. All enterprises which conduct taxable activity were required to register for GST if their annual turnover is greater than \$40.000. It was introduced in 1986 and is collected by the Inland Revenue Department (IRD).

¹⁸ Structural surveys carried on by INSEE provide the distribution of turnover by product. This distribution is calculated annually and makes it possible to calculate the disaggregation of sectoral turnover by product. This disaggregation is used to aggregate the consumer price indexes at the level of the corresponding products of the CPI System associated with those other products.

67. “Statistics New Zealand (SNZ)¹⁹ has access to individual tax records and is currently using GST records to update and maintain the BR. GST sales are also being investigated for potential use as a sample design variable for some surveys in preference to the traditional full-time equivalent employees variable.”

68. “The availability of GST data from the IRD has provided the opportunity for the development of a short term economic indicator. The GST database contains a vast amount of information which has never been available before. It has the potential to provide:

- An economy wide sub-annual industry economic indicator series.
- A time series of detailed industry information useful for micro-analysis.
- Potentially, regional information.
- Data to replace the existing Quarterly Manufacturing Survey, Retail Trade Survey and Wholesale Trade Survey collections.”

69. “They break down to as many as four digits for ANZSIC based industries, which means that 78 activities can be covered. The sales variable (actual, seasonally-adjusted and trend) is available for each of them. The only categories identified as tourism industries at present are Accommodation, Cafés and Restaurants and I&J. Transport, Storage and Communication Services.”

70. “The initial release of the experimental series include:

- Monthly sales and purchases.
- Actual, seasonally adjusted and trend series.
- By ANZSIC division (17 industry divisions).
- By 78 ANZSIC based industries in electronic format for interested users.”

D. Spain’s large enterprises indicators

71. In Spain (*Rey, P., 1997*) the example given is rather unusual because, although it refers to a monthly indicator based on VAT declarations, this is exclusively for large enterprises from the fiscal point of view, that is, those that declared over 6 million euros during the previous tax year. Such companies, of which there are about 21,000 and which therefore account for no more than 0.8 per cent of total companies, invoice approximately two thirds of the total sales declared (*Ministerio de Hacienda, 2002*). The Tax Administration receives these declarations every month and, since 1988, they have been used internally for diagnosis and planning, sectorial analysis and the detection and measurement of changes in actual rates for VAT and other deductions.

¹⁹ [http://www.stats.govt.nz/domino/external/omni/omni.nsf/outputs/Business+Activity+\(GST\)+Indicator](http://www.stats.govt.nz/domino/external/omni/omni.nsf/outputs/Business+Activity+(GST)+Indicator)

72. One of the main advantages of this information is that it is immediately available.²⁰ This is why we wanted to explore to what extent turnover trends in this type of tourism company might be a relevant indicator for short-term analysis and to what extent it might be predictive. It has not been possible to carry out a study in this field but it would seem that, in view of the synchronisation of some variables in the almost 21,000 companies with the general economic cycle, that this might also be the case for the most relevant tourism industries except that this would be limited to countries that are mainly generators (that is, where the flow of resident departures to the rest of the world is quantitatively significant) and to countries in which tourism activity accounts for a significant share of GDP.

73. Large enterprises (LE) operate in all sectors although it is reasonable to assume that the sectorial pattern is very different to the general pattern. They represent sectors such as oil refining, electricity, vehicle construction, air, rail and sea transport, banking and insurance. However, they are not so prevalent in activities in which small companies tend to dominate such as building and housing alterations, restaurants and personal services.

74. The term “large enterprise” as used by Spain’s Fiscal Administration is different to the way it is usually used in European regulations. The European Commission Recommendation dated 3 April 1996 considers a LE to be one with annual sales in excess of 40 million euros and staff of over 250/year, whereas “*medium companies*” are defined as independent companies with sales of 7-40 million euros and a staff of 50-250. By exclusion, “*small companies*” are independent and have sales of less than 7 million euros a year and fewer than 50 workers.²¹

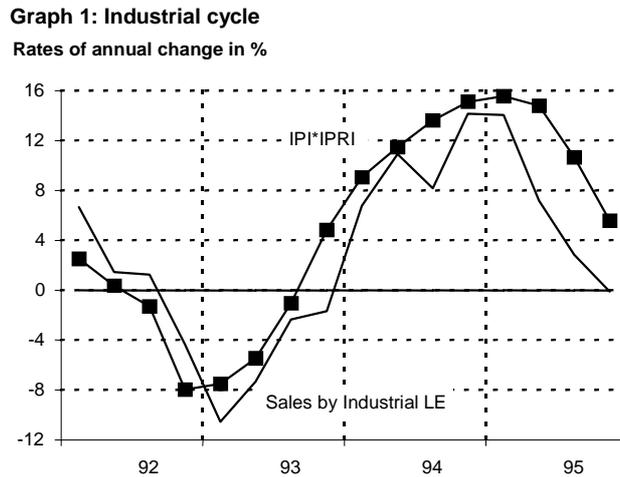
75. The validity of LE figures as a short-term indicator can be assessed by comparing them with other sources of information. The following four cases can serve as an example of this.

²⁰ Large Companies have to submit their declarations before 20th of the month following accrual, so data becomes available about 25 days after the end of the month in question.

²¹ Of the 21,000 enterprises described as large by the tax administration, about 3,000 can also be considered large according to the European regulations, 14,000 would be considered medium and the remainder would be considered small. With regard to turnover, the first group, that is the companies that are considered large in European terms, invoice over 45% of total sales, whereas the medium companies account for 17% and the remainder (that is, small in European terms but large for tax purposes) account for just over 1%.

*Industrial Large Enterprise sales and Industrial Production/Price Ratios (IPI*IPRI)*

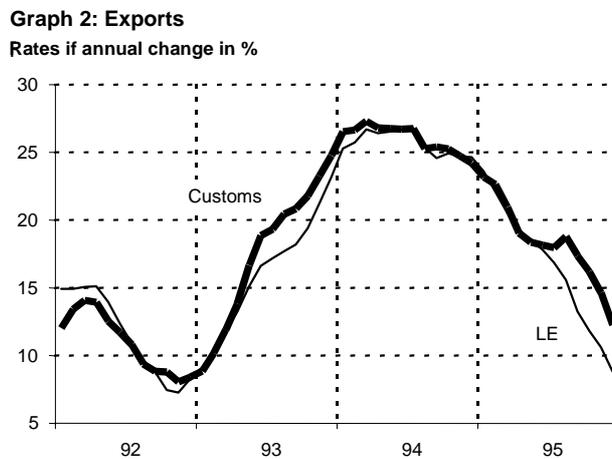
76. Graph 1 compares the sales of industrial LE with an indicator for turnover obtained from the product of Industrial Production and Price indexes (IPI and IPRI respectively). This is the only turnover indicator that can currently be obtained from short-term statistics drawn up by the Spanish National Statistical Office (INE).



77. Both series offer the same cyclical profile in spite of large differences in area and coverage. The greatest discrepancy noted towards the end of the period is justified by the greater weight of exports in LE turnover in comparison with most companies.

Large Enterprise exports and Customs exports

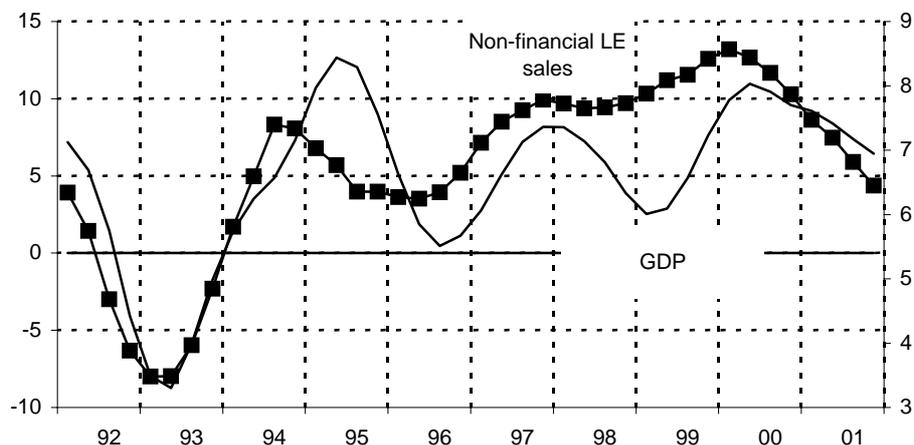
78. The characteristic stressed in the above paragraph, the large share of foreign sales, means that LE exports can be used as an early indicator of the exports which several months later will be officially published by the Customs and Special Tax Department. Graph 2 shows this property.



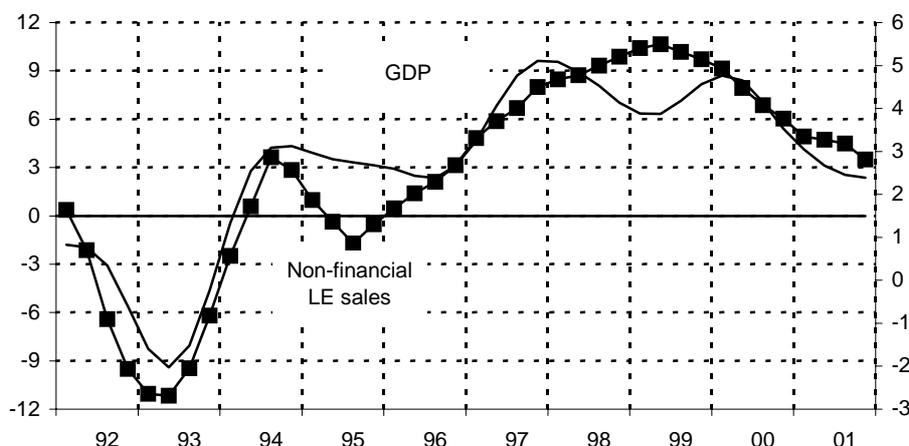
Domestic sales by non-financial Large Enterprises and GDP

79. Finally, trends in domestic sales by non-financial LE and GDP can also be analysed together in both nominal and real terms. This comparison is made in Graphs 3 and 4 in which the GDP series excludes non-market services.

Graph 3. GDP (current prices) and LE domestic sales
Rates of annual change in %



Graph 4. GDP (constant prices) and deflated LE domestic sales
Rates of annual change in %

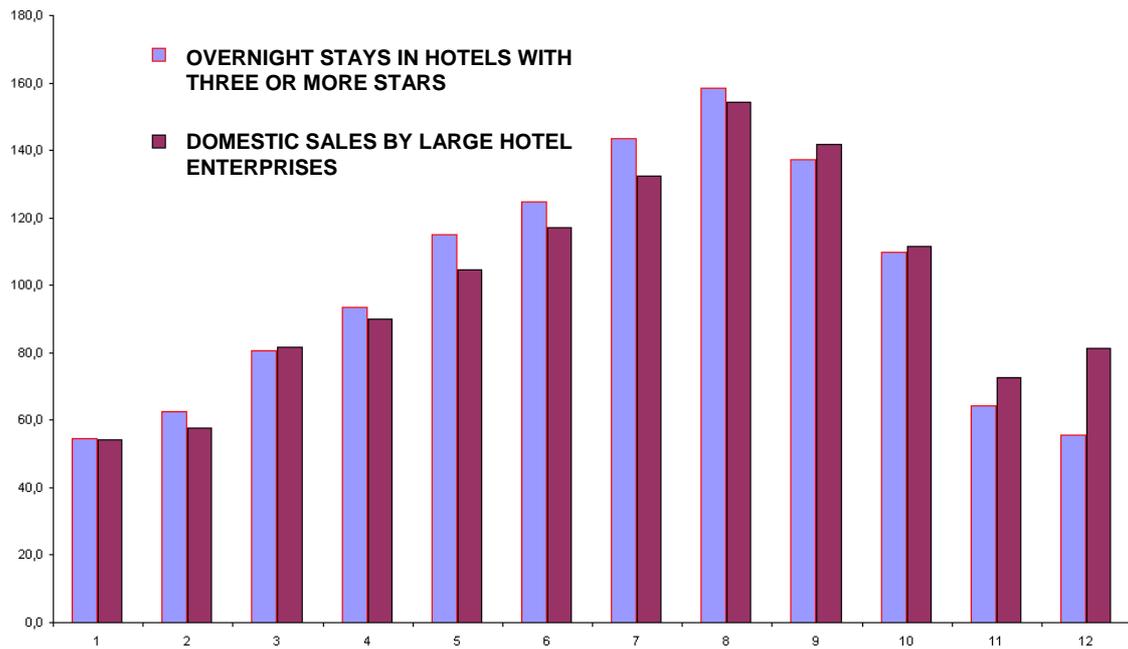


80. Bearing in mind the enormous conceptual differences between the two concepts, the estimation of the cyclical profile of GDP that can be drawn from turnover can be described as at least acceptable. It must not be forgotten that the sales used in the comparison are domestic sales, so the export cycles which is present in GDP explains many of the divergences.

81. The consistency between sales and GDP indicates that sales by LE which are available about 25 days after the end of the month might, after due processing, be a good indicator for the flash estimates that are recommended by international organisations.

Seasonality of tourism activity

82. One of the concerns that arises when using series taken from tax records is the possibility that they might not faithfully reproduce the seasonal profile of the variable to be measured. The following graph shows the comparison between the seasonal factors obtained for a five-year series, of overnight stays by residents and non-residents in medium and high-range hotel accommodation (rated with three or more stars)²² and domestic sales by some 250 Large hotel enterprises, for the period used, responsible for a 40 per cent of total employment in the Accommodation industry.



In general, the figures seem to tally, although there is a problem during the last period of the year caused by accumulation during that month of certain adjustment in tax declarations made by companies that push up sales figures.

²² In principle, these are the overnight stays that are relevant for tourism analysis.

IV. BUSINESS TENDENCY SURVEYS APPLIED TO TOURISM INDUSTRIES

83. This chapter draws attention on the opportunity of carrying out such surveys in tourism industries (also called business opinions, conditions or climate surveys because they aim to collect –on a monthly or quarterly basis– qualitative information from business managers). Since the main argument of this document is the use of tax records for drawing up or complementing annual and short-term quantitative statistics in tourism-related industries, this chapter might seem out of context. However, there are three reasons why this should be considered:

- In countries with developed tax systems, these surveys are a good example of complementarity between administrative and statistical data: quantitative variables from fiscal records and qualitative variables from surveys.
- Concerning the applications of business tendency surveys, it is important to take into account that they are very useful to improve the economic analysis of tourism and microeconomic management of private operators. Businesses need to access to short term statistics and information for planning their activities, due to the fact that consumer preferences are also being modified. The availability of information associated particularly with the tendencies of demand is of great importance for them, specially in the case of the existence of a cyclical profile of tourist activity (see 90.-95.).
- As stated in the Foreword, it is mainly countries with developed fiscal systems that are able to use fiscal data for statistical purposes. In developing countries, tax information systems do not usually possess the coverage and data quality needed for statistical uses. Opinion surveys are therefore a cheap and rapid tool for monitoring and forecasting business cycles in tourism industries as their rate of production also reflects a characteristic of tourism activity, namely, its marked seasonality.

84. Tourism is a phenomenon mainly of demand and short term: in this sense, it breaks away from all classical conceptions about the determinant role of supply – in tourism, supply does not create its own supply, at Say's Law style – and the timelessness of its sales in the market – “supply creates its own demand”, was a determinism that could take place in the long terms. Hence the feasibility to achieve balance, in the classic perspective-.

As a result, demand forecast becomes essential in any scenario: specially in those activities like tourism characterized by the effect of seasonal factors, which must always be better known and evaluated in order to suitably streamline entrepreneurial response to tourist demand and its different components.

85. The purpose of business tendency surveys seems to be indispensable in order to know the perspectives of evolution of the main variables related to the supply side of tourist activity, essentially those associated with prices, employment, salaries, occupation level, among the most important ones. They can be applied to different agents: entrepreneurs associated with hotel and restaurants and, particularly travel agencies, that have privileged information regarding perspectives on future demands.

86. These types of surveys allow to collect quite immediately opinions from an important sample of companies that operate in tourism industries, through a questionnaire that would include key-qualitative questions, open to a subsequent quantitative treatment. They would be an extension of the pioneer research carried on in the 50's and 60's on the industrial activity and there is no technical reason that would prevent from applying these surveys to tourism industries (or part of them). The basic assumption is that agents forecasts and short-term expectations are incompletely summarized by the synthesis indicators obtained from conventional quantitative statistical sources (*Fayolle, J., 1987*). Due to these reasons, qualitative indicators could be a relevant tool also for short-term analysis in the case of tourism and would allow for the combination of short-term statistics from the demand and supply perspective.

87. We only have information of this type of surveys applied to tourism in France (which is a special case because it has been carrying out detailed quarterly surveys on hotel and restaurant services for years), Spain (an initiative of the main group of leading companies in the Spanish tourism sector – Exceltur- and with regard to the industries of Accommodation, Transport and Travel Agencies) and the pilot project to be carried out in Canada (drawn up by Statistics Canada at the request of the Canadian Tourism Commission) addressing the Hotel and Motel industry (NAICS 7211). This is called the “Traveller Accommodation Business Condition Survey” and aims to be a good surrogate for the leading trends in the tourism sector in general.

88. The latter two examples, in countries in which there has been marked development in tourism statistics in recent years, indicate that either National Tourism Administrations or tourism business groups may find this type of instrument of use.

89. In all cases, the initiatives aim to complete the framework of short-term tourism statistics because the statistical series derived from business surveys are, by their very nature, particularly suitable for business cycle monitoring and forecasting.²³ The cyclical profile of the series is in many cases easier to detect because they contain no trend and the series reflect assessments and expectations by businessmen, which make them very suitable as leading indicators. This argument has led to extensive use of business surveys series in cyclical analysis in market economies - in particular, the establishment and use of composite indicators.

90. In an activity such as tourism (depending on both consumers and the general business sector, its vulnerability could be explained by the fact that anything that affects demand from either source may have a significant impact on tourism demand), leading indicators would be quite relevant for the main stakeholders. As known, these indicators provide some advance warning of future movements in the variable of reference and have some advantages over

²³ As France compile and publish monthly indicators of turnover and quarterly opinions in tourist industries, is the best scenario for analysing the consistency between business surveys and quantitative statistical series. It must be remembered, as mentioned in 3.16, that INSEE compiles and publish also the value of turnover in constant prices calculated as turnover at current prices deflated by a deflator of sales. This volume index of turnover (variable 123 in Commission Regulation No 588/2001) is the ideal variable for consistency studies with opinions series.

short-term forecasting (because they are simpler to update and better to predict turning points or long term changes in the rate of growth).

Australian Bureau of Tourism Research carried out a pioneer research in 1994 (*Jones, S. et al, 1994*) on leading indicators for Australian visitor arrivals; from an initial list of potential indicators (such as consumer confidence, promotional and advertising expenditures, price differentials, etc.) only three were selected as leading indicators: OECD gross domestic product and unemployment, and trade weighted index –a more robust measure of Australian competitiveness than the exchange rate-

From a different perspective (*WTO/OMT and IATA, 2002*), slot allocation indicators (name given to records allocated by airport authorities to airlines to regulate traffic flow in each airport) has been identified as a leading indicator for international arrivals (Spain's Institute of Tourism Studies has been using it since 1998).

Besides these references to leading indicators for arrivals, the use of business tendency surveys would also allow to have some advance warning of future movements from the supply perspective

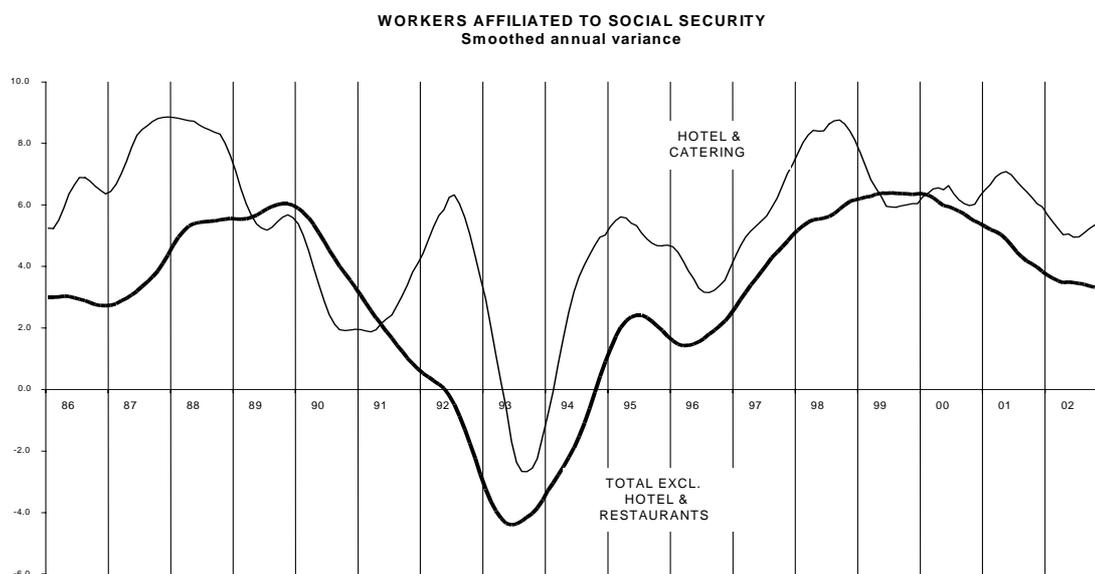
91. The development of business tendency surveys and leading indicators implies that a cyclical profile is observed in some or all of the tourism industries (specially in Hotel and restaurants), which is far from obvious in all countries. Therefore, it seems reasonable that before suggesting any of these initiatives there should first be done some research; if confirmed, then there would be an argument supporting it.

Focusing on this type of surveys, two possible scenarios could be identified in the national experiences taken as reference in this Report.

92. The first one is Canada (*Wilton, D., 1997*), which developed National Tourism Indicators –a set of more than 300 time series of data on tourism demand, the supply of tourism characteristic products, and on tourism employment-; once published in 1996, a research was carried on providing evidence that there were pronounced cycles in all these three areas. “Most of the cyclical variation in tourism demand in Canada and the supply of total tourism commodities can be explained by the cyclical variation in the overall Canadian economy; 73% and 86% of the cyclical variation in tourism demand in Canada and in the supply of tourism commodities can be statistically explained by the cyclical variation in Canadian GDP. Not only does tourism demand in Canada and the supply of tourism commodities cycle with the overall Canadian economy, the tourism and Canadian business cycles are very closely synchronized. The cyclical sensitivity coefficient (the ratio of the cyclical deviation in the tourism indicator divided by the cyclical deviation in GDP) for tourism demand in Canada and for the supply of total tourism commodities is about 1.5: the tourism cycle is about 50% larger than the GDP cycle.”

93. The second one would be a country that uses a very different approach looking for a potential cyclical profile in some basic tourism industries using series of turnover data, employment records or other type of available

indicators. This would be a feasible approach for most countries like the case identified in the graph that shows for the period 1986/2002 the existence of a cyclical profile for the hotel and restaurants sector activity in Spain, which is consistent with the general cycle of activity.



94. The indicator used in this graph is the trend in workers affiliated to the Social Security in the hotel and catering sector and in other economic activities:²⁴ It would also be possible to generate the two series from fiscal sources.

95. The clear cyclical nature of the two series is only disturbed by episodes that mainly affect tourism activity, such as the Universal Exhibition held in Spain (in Seville) in 1992. Of note is the coefficient for correlation between them of 0.73 (rising to 0.78 if the months affected by the Exhibition are not taken into account), and the high number of turning points that tally in the two series.

96. Although there is plenty of literature on this type of survey, the following paragraphs aim to describe some of their basic features and to explain how their results can be used, as in (*Nillson, 2001*).

97. In contrast to conventional statistics, business surveys make use of opinion testing techniques to collect facts from entrepreneurs about business conditions in their own companies. The information collected is, on the whole, qualitative in nature and cover, as a rule, an assessment of the current situation as well as recent and expected developments. This type of information is easier for the enterprises to supply because the answers are not based on precise records and the returns can be sent in faster.

98. Data collection procedures and calculation methods used to transform qualitative data for individual firms into relevant figures for sectors of the economy are relatively simple. The rapid execution and easy processing of results contribute to make the business surveys an appreciated tool for current economic analysis.

²⁴ The series represented are the annual rates of change which approximate the cycle/trend, using a low-pass filter to eliminate high-frequency fluctuations.

99. Compared to traditional statistical surveys, which only cover one or a few related variables from one area of the economy, business surveys collect information about a wide range of variables selected for their ability, when analysed together, to give an overall picture of a sector of the economy. The adaptation of these surveys to tourism industries could include questions related to variables such as the volume of sales, reservations, operating expenses, employment, prices and profitability.

100. The range of information covered by business surveys also goes beyond variables normally captured by classical statistics. Qualitative information may be collected for variables, which are difficult or impossible to measure by conventional methods such as:

- Floor capacity.
- Competition of other tourism markets.
- Views on some components of tourism policies as well as on the overall economic situation.

101. Business tendency surveys are conducted to gain timely information on short-term economic developments. The statistical series derived from such surveys are by their very nature particularly suitable for business cycle monitoring and forecasting and there is ample evidence that survey series are as a rule good proxies for corresponding quantitative series, if available, or show good relationships with some general reference series representing the business cycle or the general economic development, like total industrial production or GDP.

102. The evaluation of business survey series against quantitative statistical series is a type of external control or external consistency test. Such an evaluation, however, is complicated by the fact that conventional statistical series focus on metric data, while business surveys use ordinal scales for most variables, e.g. a three point scale. A crucial issue in this context is whether survey series (balances) refer to changes or trend deviations in levels in comparable quantitative statistical series.

103. Indicators derived from business survey results are based on two main categories of survey questions based on the reply expected from the respondents. For questions asking for an assessment on present level of activity as being: above normal; normal; or below normal, the balance series constructed from the replies to these questions can be regarded as representing a trend deviation. For questions asking for a judgement on present or future changes or trends in comparison to past or present periods, the balance series constructed from these replies corresponds to a first difference series.²⁵

²⁵

The basic calculation procedure used for the different surveys are much the same. For qualitative questions of the multiple-choice type, the principle is to calculate, for each question, the frequency n distribution of answers expressed by respondents and then to extend the sample results to total population levels. For quantitative questions an average of all reported figures is calculated instead of relative frequencies.

ANNEXES

Annex 1
SYSTEM OF TOURISM STATISTICS (STS)
AND ITS LINKS WITH THE
GENERAL STATISTICAL SYSTEM

1. The General Statistical System (GSS) encompasses a series of statistical functions that correspond to a group of bodies that conduct statistical work. The coverage and extension of these systems at any given time can be ascribed to a series of elements, such as:
 - the organization and legal structure of the institutional units that produce statistics (mostly public);
 - the administrative mechanisms and legally established links between these and the Central Unit;
 - the statutory or non-statutory nature of certain statistical sources and administrative controls which generate information that is liable to be used for statistical purposes;
 - the human and material resources assigned to statistical tasks in these producing units.
2. The overall aim of the GSS is to provide users with reliable, consistent and appropriate statistical data relative to the country's socio-economic structures and developments, at different territorial levels, and which is geared to international comparisons with the results obtained in the different countries. To this end, the GSS must include, in addition to all the statistical sources existing at a given time, other methodological and instrumental elements that are necessary for its development.
3. Both on account of its aim and content, the GSS must therefore reconcile statistical information systems at the various state, infra-state and international levels, through appropriate coordination and integration, to which end a centralizing body must be set up.
4. For the purposes of this task, **reconciliation** is taken to mean the controlling activity that makes it possible to ensure that a particular process meets the purpose assigned to it within the overall System; **coordination** is taken to mean the function that serves to balance statistical programmes from the twofold standpoint of activities and projects; finally, **integration** is a function geared to ensuring the connection and assembly of the different statistical products.
5. From the perspective of this document, the following aspects should be highlighted with regard to the integration function: **instrumental elements** (international concepts, definitions, classifications and standards) on the one hand, and **integrated statistical information systems** (systems of national accounts and socio-demographic statistical systems) on the other.
6. Of the two, the System of National Accounts (SNA) is doubtless the most developed. In this respect, it would be desirable for a greater balance to be achieved between the two systems in the future, insofar as they are interrelated through certain concepts, definitions and classifications, and to some extent, because the separation of economic and social statistics is in part conventional since many statistical variables are at the same time of an economic and social nature, or affect both economic and social issues without distinction.
7. It is perhaps worth highlighting that beyond the obvious fact that the number and type of available functions condition the level of development of integrated systems, a reciprocal relationship also exists since integrated systems require a consistency and rigour in the preparation of basic statistics, providing the conceptual framework required to design the instrumental elements of the integration: definitions and classifications.
8. Consequently, integrated systems (applied by virtue of the corresponding international standards) become the centre of gravity for statistical work in all areas.

9. A System of Tourism Statistics (STS) should be understood, as that part of the General Statistical System providing reliable, consistent and appropriate statistical information on the socio-economic structure and the developments of tourism, integrated within all the economic and social statistics related to other fields, at different territorial levels (state, infra-state and international).
10. The design of the STS should be viewed as the basic coordination framework of all the information produced by all stakeholders in tourism. Concepts, definitions, classifications, indicators and accounting aggregates relating to tourism, designed so as to secure an exhaustive description of the tourism phenomenon in all its aspects (physical, social, economic, etc.) and a measurement of its economic impact within a context of international comparability are a structural part of the system.
11. Although it is the countries' responsibility to carry out the development of the STS, the UNWTO recommends this should follow the Basic Principles of Official Statistics approved by the United Nations Statistical Commission (11/15 April 1994).
12. Those principles provide guidelines for establishing and maintaining a credible STS and therefore, the use of such principles should be understood as a necessary condition to maintain users' confidence in tourism statistics and, particularly, to help guaranteeing the integrity, transparency and confidentiality of the individual data and the public access to the available statistics.
13. Regarding its socio-economic aspect, the STS can be defined as a set of components, of statistical nature, made of the statistical sources themselves and the corresponding data obtained (i.e. statistics drawn from surveys, administrative records, or of a synthetic nature – like the TSA -, etc.), the specific tools, methodological references and instruments used at some stages of the process that the generation of statistics entails (as is the case of concepts, definitions, classifications, databases, etc.), and also the instrumental and organizational resources used in all these processes. As a consequence, the STS encompasses the technical aspects of field operation, the creation of statistical infrastructure, the elaboration of the results, and the completion of work leading to an integration of the data into a system of information.
14. Users concerned more specifically with the production and analysis of tourism statistics will find additional references in the actual official documents which are entitled "*Recommendations on Tourism Statistics*" and "*Tourism Satellite Account (TSA): Recommended Methodological Framework*". These two documents, approved by the United Nations, contain the existing recommendations on tourism statistics. The purpose of the first of these, approved in 1993, was to develop a first set of basic elements of STS, and the second relates to the Tourism Satellite Account (TSA), approved in 2000. Both recommendations correspond to the institutional role that the UNWTO assumes in statistics: the comparability of economic statistics, the development of international standards and the process of general guidelines.
15. In order for the STS to be, in its own right, a subsystem of the corresponding *General Statistical System*, UNWTO believes that, besides the TSA, it would be necessary to have also a Tourism Balance of Payments (TBP) because this would be another instrument unifying the referred subsystem, a function that the Balance of Payments performs for the *General Statistical System*. To some extent, a third unifying element could be a Tourism Labour Accounting System (LAS-T). A first version of the methodological design of the LAS-T was prepared by ILO and presented by the UNSC in March 2001.

16. In presenting this new contribution to tourism statistics, UNWTO wishes to recall that, at the fifth session of its General Assembly held in New Delhi in 1983, it established the general guidelines for most of its work on the international harmonization of tourism concepts and statistics. Since then, there have been many contributions from institutions and individuals alike, finally enabling us to construct the necessary bases for enhancing the credibility of the measurement of tourism's economic importance. UNWTO takes this opportunity to thank all those who have helped in this endeavour.
17. The following scheme highlights the structure of the System of Tourism Statistics:

SYSTEM OF TOURISM STATISTICS

1. BASIC STATISTICS

- 1.1. *TOURISM CONSUMPTION*
 - 1.1.1. Concepts
 - 1.1.2. Tourism units
- 1.2. *TOURISM SUPPLY*
 - 1.2.1. Concepts and units
- 1.3. *PRODUCTION FACTORS*
 - 1.3.1. Labour force
 - 1.3.2. Capital
 - 1.3.3. Technical innovations

2. CLASSIFICATIONS RELATING TO TOURISM STATISTICS

- 2.1. *TOURISM SPECIFIC PRODUCTS (List of)*
- 2.2. *STANDARD INTERNATIONAL CLASSIFICATION OF TOURISM ACTIVITIES (SICTA)*

3. TOURISM SATELLITE ACCOUNT (TSA)

- 3.1. *TSA CONCEPTS*
- 3.2. *TSA AGGREGATES*
- 3.3. *CLASSIFICATIONS FOR TSA*
 - Tourism characteristic products (List of)
 - Tourism characteristic activities (List of)
- 3.4. *TSA TABLES OF RESULTS*
- 3.5. *TSA EXTENSIONS*
 - *TSA – Regional*
 - *TSA – Indicators*
 - *TSA – Supranational perspective*
 - *TSA – Functional perspective*
 - *TSA – Institutional perspective*
 - *Tourism Labour Accounting System*

4. TOURISM BALANCE OF PAYMENTS

18. This outline is developed in the UNWTO Website (http://www.world-tourism.org/statistics/tsa_project/basic_references/index-en.htm) where the interested user will find the corresponding definitions extracted from the above-mentioned official documents.

Annex 2

Using Fiscal Sources for improving survey design and estimation

Although this is a matter that is generally only of interest to the sample design departments in NSOs, we have identified two references related to the use of fiscal sources for improving survey design and estimation. The application of fiscal sources should be mentioned here.

The first one (*ABS, 2000*) refers to the opportunities opened up by “The New Tax System” applied in Australia as from 2000, with regard to the use of Business Activity Statement (BAS) data.

“The BAS contains a limited range of data items and needs only to be returned quarterly by small businesses. Consequently, substitution opportunities are strongest for those monthly and quarterly ABS collections which are confined to a small number of data items similar to those on the BAS.”

“But BAS data also provide the means to make survey sample designs more efficient and this could result in lower sample sizes while maintaining existing levels of accuracy, enabling the Australian Bureau of Statistics (ABS) to further reduce its reporting load, especially on small businesses. At present, most ABS surveys are able to stratify the target population by size only according to the ‘number of employees’. For many ABS surveys, ‘number of employees’ does not correlate strongly with the data item(s) of interest. BAS data will allow ABS surveys to select size and stratification variables, such as turnover, capital expenditure, and wages and salaries, that are more strongly correlated with the survey data items”.

“Finally, BAS also provides for greater efficiencies in survey estimation (by using one or more of the BAS data items as benchmarks) as well as to impute for units which have not yet responded or to check the consistency of reported data. “We have been looking at the impact of replacing sales or receipts data collected via survey forms with annual tax return data for single unit establishments in our annual surveys of retail, wholesale and services. We concentrated on single units because the Employer Identification Numbers (EIN) level administrative record sales required no disaggregation and thus provide reliable measures of the (single unit) firm's sales. Also, restricting administrative source data to single units in lieu of mailing a questionnaire is”.

Similar experiences on optimising sample design when variable turnover is available for all BR units can also be found in other countries such as Spain (*Montull, M.A. et al, 2002*).

Annex 3
Variables and definitions covered by European Commission regulations
1165/98 and 588/2001

Variable	Name	Objective and definition	Activities (NACE Rev.1) for which the variable is required (1)
110	Production	It is the objective of the production index to measure changes in the volume of output at close and regular intervals. It provides a measure of the volume trend in value added at factor cost over a given reference period. Subsidies on products and on production are included in value added at factor cost, whereas all taxes on products and on production are excluded. The theoretical formula for an index of production is a Laspeyres-type volume index.	I, C
115	Production of building construction (2)		C
116	Production of civil engineering (2)		C
120	Turnover	It is the objective of the turnover index to show the evolution of the market for goods and services. It comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT and other similar deductible taxes. It also includes all other charges (transport, packaging, etc.) passed on to the customer, even if these charges are listed separately in the invoice. Income classified as other operating income, financial income and extraordinary income in company accounts is excluded from turnover. Subsidies are also excluded.	I, C, RT, OS
121	Domestic turnover		I, C
122	Non-domestic turnover		I, C
123	Volume of sales (3)	The volume of sales represents the value of turnover in constant prices and as such is a quantity index. It can be calculated as turnover at current prices, deflated by the deflator of sales, or as a quantity index derived directly from the quantity of goods sold.	
130	New orders received	It is the objective of the new orders received index to show the development of demand for products and services as an indication of future production. It is also suitable to indicate whether the demand originates from the domestic or non-domestic market. An order is defined as the value of the contract linking a producer and a third party in respect of the provision by the producer of goods and services. The order is accepted if, in the producer's judgement, there is sufficient evidence for a valid agreement. VAT, subsidies and reduction in prices, rebates and discounts should be deducted from the value of orders. This value includes all other charges (transport, packaging, etc.) passed on to the customer.	I, C
131	Domestic new orders		I, C
132	Non-domestic new orders		I, C
135	New orders for building construction		C
136	New orders received for civil engineering		C
210	Number of persons employed	It is the objective of the index of number of persons employed to show the development of employment. The number of persons employed is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers). It includes persons absent for a short period (e.g. sick leave, paid leave or special leave), but not those absent for an indefinite period. It also includes part-time workers, seasonal workers, apprentices and home workers when they are on the payroll. The number of persons employed should be determined as a representative figure for the reference period.	I, C, RT, OS
211	Number of employees	The number of employees is used as a temporary approximation of the number of persons employed. It is defined as those persons who work for an employer and who have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind.	
220	Hours worked	It is the objective of the hours worked index to show the development in the volume of work done. The total number of hours worked by employees represents the aggregate number of hours actually worked for the output of the observation unit during the reference period. This variable excludes hours paid but not actually worked such as for annual leave, holidays and sickness leave. It also excludes meal breaks and commuting between home and work.	I, C

Variable	Name	Objective and definition	Activities (NACE Rev.1) for which the variable is required (1)
230	Wages and salaries	It is the objective of the wages and salaries index to approximate the development of the wage and salaries bill. Wages and salaries are defined as the total remuneration, in cash or in kind, payable to all persons counted on the payroll. Wages and salaries include the values of any social contributions, income taxes, etc. payable by the employee. Social contributions payable by the employer are excluded. Stock options are also excluded mainly for practical reasons linked to the difficulties of a harmonised definition.	I, C
310	Output prices	It is the objective of the output price index to measure the monthly development of transaction prices of economic activities. This variable combines the output prices of the domestic market and non-domestic market.	I, C
311	Output prices of the domestic market		I, C
312	Output prices of the non-domestic market		I, C
313	Unit value index	The unit value index may be used as an approximation for non-domestic output prices. For the purpose of this index, unit values are calculated as the value of sales of a product divided by the quantity sold derived from foreign trade data.	
320	Construction costs	It is the objective of the construction cost index to show the evolution of costs incurred by the contractor to carry out the construction process. The component costs index (material costs and labour costs) shows the price developments of production factors used in the construction industry.	C
321	Material costs	The material costs index is generally calculated using material prices. Prices of materials should be based on actual prices rather than list prices. Prices are valued excluding VAT.	C
322	Labour costs	The labour cost index should cover wages and salaries and social security charges for all persons employed. Social security charges include: (i) statutory social contributions payable by the employer, (ii) collectively agreed, contractual and voluntary social contributions payable by the employer and (iii) imputed social contributions (social benefits paid directly by the employer).	C
330	Deflator of sales	It is the objective of the deflator of sales to adjust turnover for the impact of price changes. The deflator of sales in retail trade is a deflator not of the service provided but of the goods sold. The prices used to calculate the deflator for an activity are calculated as a weighted average of the relevant goods price indices for that activity. It is essential that all price-determining characteristics of the products are taken into account, including quantity of units sold, transport provided, rebates, guarantee conditions and destination.	RT
411	Building permits: number of dwellings	It is the objective of the number of dwellings building permit index to show the future development of construction activity in terms of unit numbers. A building permit is an authorisation to start work on a building project.	C
412	Building permits: square metres of useful floor area or alternative size measure	It is the objective of the useful floor area building permit index to show the future development of construction activity in terms of volume. A building permit is an authorisation to start work on a building project. This index is compiled from the square metre of useful floor area of buildings for which permits have been granted.	C

(1) Industry (I): sections C to E.

Construction (C): section F.

Retail Trade and Repair (RT): division 52.

Other Services (OS): divisions 50 and 51 and sections H, I, J, K, M, N and O.

(2) The objectives and characteristics of indices for variable 110 (production) also apply to this index.

(3) This variable only appears as alternative to variable 330 and, therefore, only for the retail trade.

Annex 4

International comparability of tourism activity: basic indicators

Internationally comparable tourism data should be based on certain common key indicators related to the different forms of tourism and certain tourism industries.

A. Inbound Tourism

Arrivals are a basic measure and are not necessarily equal to the number of different persons travelling. When a person visits the same country several times a year, each visit by the same person is counted as a separate arrival. If a person visits several countries during the course of a single trip, his/her arrival in each country is recorded separately. Arrivals associated with inbound tourism equals arrivals by international visitors to the economic territory of the country of reference and include both tourists and same-day non-resident visitors.

Data on arrivals may be obtained from different sources. In some cases, data are obtained from border statistics derived from administrative records (police, immigration, traffic counts, and other type of controls) as well as border surveys. In other cases, data are obtained from registrations at tourism accommodation establishments.

Statistics on *overnight stays* refer to the number of nights spent by non-resident tourists in hotels and similar establishments, or in all types of tourism accommodation establishments. If one person travels to a country and spends five nights there, that makes five tourist overnight stays (or person-nights).

Average length of stay refers to the average number of nights spent by tourists (overnight visitors) in all types of tourism accommodation establishments.

Tourism expenditure data are obtained from the item "travel receipts" of the Balance of Payments (BOP) of each country and corresponds to the expenditure of non-resident visitors (tourists and same-day visitors) within the economic activity of the country of reference. BOP data typically are collected either by a central bank or a nation's official statistical agency.

B. Domestic Tourism

Domestic *overnight stays* is the number of nights by resident tourists in hotels and similar establishments, or in all types of tourism accommodation establishments, and may be obtained either by household surveys or from records of accommodation establishments. *Same-day visits* typically are estimated from household surveys.

C. Outbound Tourism

Departures associated with outbound tourism correspond to the departures of resident tourists outside the economic territory of the country of reference.

Tourism expenditure data in other countries are obtained from the item "travel expenditure" of the BOP of a country and correspond to the "expenditure of resident visitors (tourists and same-day visitors)" outside the economic territory of the country of reference. This information often is obtained from survey data shared between the destination and origin nation, by border surveys, and possibly supplemented by currency control forms.

D. Tourism Industries

One of the most basic statistics related to tourism industries is *the number of establishments* within each tourism industry. This information may be compiled from business registration or tax data. Many different characteristics of businesses in each tourism industry are possible, but some of the most common are those related to the accommodation industry. *The number of rooms and bed-places* data refers to the capacity in hotels and similar establishments for providing temporary accommodation to visitors.

Occupancy rate refers to the relationship between available capacity and the extent to which it is used. This rate may refer either to use of rooms or of beds. Occupancy rate is based on the number of overnight stays of both resident and non-resident tourists.

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