



OECD Review on Measuring Tourism at subnational level

The economy-wide effects of tourism are significant and vary a lot from one territory to another (e.g. urban, rural, coastal or mountainous areas) in terms of number of visitors, type of tourism, seasonality patterns, revenues and added value per visitor or jobs generated. Regions play a growing role in tourism development and policy design. OECD work also underlines the key role of the central government in engaging all stakeholders horizontally and vertically in a “whole-of-government” approach, including on measurement issues. A main challenge for countries is to develop at sub-national level a qualitative system of information and statistics on tourism, including timely data with a good level of disaggregation, and comparable data among regions and with national data. This report summarises ongoing work at the OECD and presents a limited number of statistical initiatives aimed at better measuring tourism at subnational level, focusing on total economic impact of tourism; direct economic impacts of tourism; tourism-related employment; enterprise demographics; and tourism spending/revenues and high yield visitors. This work is still work in progress and will be further developed in the context of the OECD Tourism Committee; the final report is to be released early 2015. For more information, please contact alain.dupeyras@oecd.org.

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OECD ONGOING REVIEW ON MEASURING TOURISM AT SUBNATIONAL LEVEL

1. Introduction

The OECD Tourism Committee is collecting country statistical initiatives that support a better measurement of the various impacts of tourism at sub-national level, with a focus on concrete initiatives undertaken by public or public/private agencies, and delivering figures of strong policy and industry-relevance.

The economy-wide effects of tourism are significant and the size of the tourism economy varies a lot from one territory to another (e.g. urban, rural, coastal or mountainous areas) in terms of number of visitors, type of tourism, seasonality patterns, revenues and added value per visitor or jobs generated.

OECD Tourism Committee work on policies highlights the growing role of the sub-national level in tourism development and the evolving relationship and division of competencies between central government and regions. It also underlines the key role of the central government in engaging all stakeholders horizontally and vertically in a “whole-of-government” approach, including on measurement issues.

A main challenge however for countries is to develop at sub-national level a qualitative system of information and statistics on tourism, including timely data with a good level of disaggregation, and comparable data among regions and with national data.

This report presents a limited number of statistical initiatives undertaken by countries and regions to better measure tourism at subnational level. The statistical areas included focus on: total economic impact of tourism; direct economic impacts of tourism; tourism-related employment; enterprise demographics; and tourism spending/revenues and high yield visitors. This work is still work in progress and will be further developed in the context of the OECD Tourism Committee; the final report is to be released early 2015.

2. Measuring tourism at sub-national level

In many OECD countries the full competence for tourism does not lie with the central governments. There is therefore a significant role to be played in tourism governance and development at sub-national level. This level can be represented by a region, a city, or another type of “tourism destination/area”. The “tourism destination” level is very significant from a tourism perspective – the destination is the geographical area which is chosen by the visitor due to its mix of attractions, accommodation, catering and entertainment/activities - but often difficult to capture in terms of statistical measurement as it does not necessarily match with the administrative level for which the data are usually available.

If much has been done in the past 20 years to improve the economic measurement of tourism at national level (e.g. Tourism Satellite Account), less has been undertaken at sub-national level. The knowledge on assessing the impact of tourism at subnational level remains very disparate. Tourism data at sub-national level rarely allows comparisons among regions and with national data. The information is often weakly disaggregated, is not always analysed and shared effectively and is not necessarily statistically valid. The evolution of methods and the production of data to estimate tourism at sub-national level continues to be hindered by weaknesses in the statistical base, by lack of capacity, and by lack of funding supporting tourism statistics development.

Robust, tourism policy-relevant information is lacking, undermining a good understanding of the local context. Where good information and data is accessible, this can provide an effective tool for galvanising local action, for reinforcing the performance of policies and programmes, or for driving investment and development projects. Agencies responsible for the development of tourism at sub-national level are therefore more and more willing to play an active role on measurement issues.

There are numerous challenges to effective qualitative and quantitative information on tourism at the sub-national level, which must be addressed:

- strengthen governance for the development of tourism statistics to avoid problems of overlapping and coherence, engage all players, and secure appropriate funding
- define a common perspective regarding the statistical information needs, in partnership with the main industry players, taking both a horizontal and vertical perspective
- ensure that institutional and human capacity for the development of tourism statistics is available and durable over time
- determinate the boundaries of the territory to be observed, taking into account the design and limits of the broader statistical system.

3. Regional tourism satellite accounts

The Tourism Satellite Account (TSA) can serve as a solid conceptual basis to support the measurement of tourism at regional level, with tools such as Regional Tourism Satellite Accounts (RTSA). Several countries including Australia (multiregional), Austria (Upper Austria, Lower Austria, and Vienna), Belgium (Flanders and Walloon regions), Canada (multiregional), Denmark (multiregional), India (States Madhya Pradesh and Kerala), Italy (Veneto region), Finland (multiregional), France (La Réunion), Japan, Norway (multiregional), Poland (methodological development), Spain (Andalusia, Canaries, Castile and Leon, Basque Country, Community of Madrid), United Kingdom (Wales) and the United States (Florida and Louisiana) have developed RTSA or close adaptations or are in the process of developing it.

The RTSA provides a solid evidence base for tourism policy making, but there are many practical limitations to its development at sub-national level:

- Regional agencies should have the resources and the statistical capacities to drive RTSA development – this rarely exists.
- The institutional will is required to build the comprehensive statistical base, and to construct a data-intensive commodity-by-industry matrix.
- The quality of tourism statistical data available at the regional level is often insufficient - it is therefore very difficult to adapt the TSA fully at regional level.
- The developmental, practical and costs implications are important. Its development requires significant work, even when a well-developed system of regional accounts exist.
- The RTSA does not necessarily provide what policy makers want in terms of tools for impact analysis on tourism:
 - The RTSA cannot show which are the visitors that have the highest levels of value added per trip.
 - The RTSA may be of limited use to estimate the indirect effects of tourism
 - The RTSA provides limited attention to estimate tourism-related employment

For these reasons, the RTSA remain often an irregular project, and a one-off exercise. Very few countries have it as an ongoing project. Many countries and regions are looking for simpler models to estimate the economic impacts of tourism, using in some cases the RTSA as a base tool.

4. Statistical initiatives to better measure tourism at subnational level

a. Australia – Developing regional tourism profiles

Tourism Research Australia (TRA) produces a wide range of tourism research information at the national, state/territory and regional level. The Regional Tourism Profiles provide the tourism industry, tourism researchers, planners and policy makers with comprehensive activity data on the “tourism regions” in Australia. Data are gathered from two primary surveys: the International Visitor Survey (IVS) and the National Visitor Survey (NVS).

The focus of the tables in the regional tourism profiles has been to provide an overview of international and domestic travel activity, tourism businesses and accommodation establishments in the tourism region, as measured by visitors, nights and spending. The profiles present data for both the demand (international and domestic visitors, nights and expenditure) and supply (tourism businesses and accommodation) sides of tourism in Australia’s tourism regions and states/territories.

TRA conducts two major travel surveys, which in terms of the type of information collected, are similar to many other travel surveys conducted around the world, but the scale of the TRA surveys is larger than most, 40000 visitors for the International Visitor Survey (IVS) and 120000 residents for the National Visitor Survey (NVS). Also, TRA is moving toward using a dual-frame landline and mobile sample for NVS in 2014. The ability of the TRA surveys to deliver robust sub-national/state estimates can be largely attributed to two factors:

- The commitment to fund large sample sizes enables reliable regional statistics to be generated for each of the eight Australian states and territories, and for some of the more important destination regions within Australia.
- The longevity of these two surveys has enabled the methods used to analyse and model the regional economic data to be refined and stabilised.

As with all surveys, the estimates are subject to sampling variability. This means the survey results may vary from the results that would have been produced if all visitors had been interviewed in a census. Regional Tourism Profiles statistics should be used in conjunction with other information sources, such as population statistics, feedback from local operators, data from local councils etc.

TRA has augmented the tourism expenditure survey data to estimate State Tourism Satellite Account as well as building in-house modelling capacity to carry out tourism economic impact analysis (a State tourism CGE model).

b. Canada – Measuring the total economic impact of tourism in regions

Alberta Tourism, Parks and Recreation (tourism research and innovation branch) is estimating and analysing the total impact - direct, indirect and induced impacts - of tourism on the regional economy. Economic impact analysis is used to determine the impacts of additional tourist spending primarily on employment, income (value-added) and government tax revenues in an economy. It provides a snapshot of the economy at a particular point in time based on the initial spending.

The project uses a Demand Economic Impact Model which was developed in the early 1990s. The model has been updated regularly since then with input/output tables from Statistics Canada. The model uses Statistics Canada's International Travel Survey and the Travel Survey of Residents of Canada Econometric Research Limited. The International Travel Survey (ITS) provides statistics on travellers, to and from Canada. The frontier counts component provides a full range of statistics on the number of international travellers by selected category and by type of transportation as well as the number of automobiles, trucks and other vehicles (motorcycles, snowmobiles, bicycles) entering Canada.

The work provides information on the origin of visitors (Alberta, Canada and other countries), their direct tourism expenditure and main purpose of visit. It also provides a detailed geographical breakdown of the tourism expenditure by tourism region and type. Customised reports are

prepared for the six tourism regions, and for the seven land-use framework regions to inform land-based decision-making relative to tourism in the province of Alberta.

The models enables to present the Direct Tourism Expenditures broken down by category. It is then used to calculate the net economic impact (value-added), the total number of full-time equivalent jobs, and the value of wages and salaries associated with tourism-related employment. It provides a breakdown for tax revenues - the tax impacts of tourism expenditure - accrued to the three levels of governments (Federal, Provincial and local) and detailed information about the employment impact of tourism expenditure.

c. Ireland – Using business registers in regional tourism industry analysis

The Central Statistical Office of Ireland is using business registers as a source to generate a new suite of supply side tourism indicators, providing a profile of enterprise demography and employment for the tourism industries at county level. The main variables available from the Business Register are location, legal status and size of enterprise, number of employees and persons engaged, and total turnover.

Business registers are the foundation upon which all business statistics are compiled. The comprehensive coverage of business registers is of particular relevance in the context of tourism, which is a fragmented sector dispersed across a variety of industries. Large datasets such as business registers have the advantage to be already well established and sufficiently large to provide robust, sub-national data.

Business demography statistics provide data on the active population of enterprises in the state, including enterprise births (entries) and deaths (exits or failures) along with information on growth and survival (life expectancy) rates. These statistics are also used to generate indicators of entrepreneurial activity and the factors that enhance or impede it and to understand the contribution of newly born enterprises to the creation of jobs.

The information provided is based on enterprise and employment demography in the tourism industries, irrespective of whether or not the products or services sold by these enterprises were consumed by tourists. In other words the analyses do not quantify information on enterprises and employment generated by tourism demand.

'Tourism Dependency Ratios' - ratio of the tourism industries to the total economy for a particular region and variable (e.g. tourism enterprises demography, employment, turnover) - are calculated to illustrate how the tourism supply side can be analysed and understood from a spatial perspective. This allow to develop a regional demography to illustrate the relative importance of the tourism industries to each region.

The Business Demography dataset has the advantage of being already compiled and consequently, the only cost of using these data is the marginal cost of conducting new analyses. When linked at a micro-data level to other administrative data sources, the power of these data

grow significantly. This is the case for example with complementary information and analyses, such as Tourism Dependency Ratios.

The use of business demography data is fundamental as standardised business register and demography data exist in most countries where reasonably developed statistical systems exist, making the approach outlined readily transferable and offering the opportunity to develop internationally comparable metrics by re-using already harmonised statistical sources.

d. Japan – Developing a regional tourism economic survey

This statistical initiative was the first attempt in Japan to apprehend the economic activities related to tourism from the supply side. The survey was conducted by the Japan Tourism Agency, Ministry of Land, Infrastructure, Transport and Tourism in 2012. It provided new type of information by identifying the tourism sales from the total sales of establishments and by obtaining rough estimates for the economic contribution of tourism-related establishments to the region.

The “Regional Tourism Economic Survey” covers a wide range of tourism-related establishments focusing on the tourism sales of establishments, and analysing their expenditure by item and by region. The survey brings information on the difference in revenue structure and actions between tourism destinations and establishments. The survey uses as a main source the economic census for business activity in Japan, covers about 6000 local communities selected because of the level of demand for tourism, and about 1 million tourism industry establishments.

The survey covers i) the ratio of sales from tourists (hereinafter called “tourism ratio”), ii) the amount of sales; iii) the number of employees involved in tourism; iv) the monthly variation of the number of customers; v) the composition of the expenditure by item and by region; and vi) the spending on tourism marketing. Other items such as management organisation, capital, number of employees, sales amount by category of business, expenditures by item, utilisation of electronic transactions, etc. are covered by the Economic Census Survey.

Key results show the status of concentration of tourism sales, and analyse the geographical distribution of the purchases and outsourcing expenses of the establishments. Mobile positioning information is also used to correlate some of the findings. The results also highlight that the establishments where the tourism ratio exceeds 50% showed higher local procurement ratio than others and that they had more spillover effect on the regional economy.

e. New Zealand – Regional tourism indicators

In 2012, the Ministry of Business, Innovation and Employment launched the regional tourism indicators (RTI) initiative to improve the understanding of tourism at the regional level. The RTI are designed to provide timely data on tourism spending, both international and domestic travellers, in the various regions of New Zealand. The indicators can potentially help shaping the different regions’ advertising strategy, provide support for major events, inform policy work to better attract and cater for particular markets, and increase the value of international visitors.

The use of survey data to capture spending information in various regions would be expensive as it requires a large sample size to provide data at the detailed level required. Therefore Statistics New Zealand uses electronic card transaction (ECT) data to provide timely measures of retail trade. RTI started in January 2008, they are compiled on a monthly basis, and can be summarised as monthly, quarterly or annual data.

The RTI data includes all debit, credit and charge card transactions with New Zealand based merchants and all card-present transactions at the point of sale. The data set is best used to identify changes over time. The RTI enable to see more accurately which visitor markets are coming to a given region, track whether the market mix is changing over time and identify growth markets. The variables used are i) Origin of merchant; ii) Origin of card holder; iii) Type of merchant; and iv) Month and year

RTI by themselves cannot provide actual expenditure figures, as they only represent a portion of total tourism spending (as they monitor a sample of electronic transactions). For this reason, data are published as an index which measures the change in expenditure rather than the actual dollars spent.

The data cover international and domestic tourism. They can be filtered by Regional Tourism Organization, local destination or industry group. Key results compare for example the monthly international visitor spending by Regional Tourism Organisation or show the different growth patterns in Chinese tourists spending by region.

The Regional Tourism Estimates (RTEs) take the RTI one step further by producing estimates of absolute dollar values (instead of indices) of tourism expenditure which can be disaggregated at a detailed level e.g. by industry, visitors' country of origin, destination regions, Regional Tourism Organisation level and territorial authority. To achieve this, RTEs are based on RTI and are calibrated by the Tourism Satellite Account by industry and the international visitor survey by visitor's country of origin.

f. Spain – Regional tourism satellite account

The Tourism Satellite Account of the Community of Madrid is a statistical instrument designed to comprehensively measure the contribution of tourism to the region economy in terms of its contribution to GDP, employment and other macroeconomic variables.

The objectives of this initiative are i) to provide a complete measurement of the economic importance of tourism in the Madrid Region, through macroeconomic indicators such as the contribution of tourism to GDP, production or demand; ii) to highlight the role of tourism as a generator of jobs; iii) to characterise the structures of production and /or costs of tourism industries; and iv) to reflect the scale of investment in productive capital linked to tourism.

The information compiled by the National Statistical Institute provides the basis for the TSA supply tables, as well as specific modules within it referring to travel agencies and accommodation establishments. The breakdown of variables for the sources and the possibility

of using micro-data from the surveys for regional enterprises, together with regional administrative or registration sources, permits coverage of most of the requirements of the TSA. A similar case is employment, for which national sources (workforce survey, Social Security records) are generally available with a sufficient degree of regional disaggregation.

Nonetheless, these surveys have not been designed to produce regional estimates with a sufficient level of detail. New statistical initiatives developed include: a “Domestic tourism expenditure survey”, a “Visitor survey for specific tourism areas” and, as the element which integrates all those efforts, a TSA for the region, (published in 2010 referring to years 2006-2009) based on international methods and specific regional procedures.

Notwithstanding the statistical limitations, this initiative shows that an examination of tourist demand broken down by purpose of trip offers valuable information for the industries and public authorities concerned. Industry stakeholders can get a better understanding of the products consumed by the different types of tourists and, consequently, they can adjust their production. The information also support public authorities when designing their tourism-related policies, for example to mitigate the sharp seasonality of tourism or to support a better distribution of tourist flows over a geographical area.

This initiative requires a major statistical effort to be undertaken by the region, with the implementation of specific statistical projects to fill existing gaps. It also requires detailed statistical information at national and regional levels. In Spain, the system of tourism information provides detailed regional breakdowns.

g. United Kingdom – Optimising tourism intelligence at regional level

The Tourism Intelligence Unit (TIU) at the Office for national statistics of the United Kingdom (ONS) examines the value of tourism (supply and demand sides) in the regions and sub-regions of the UK, by optimising the amount of information from all the data sources available.

This project extends the Tourism Satellite Account (TSA) analysis to the regional level in the UK and the sub-regional level in England and Wales. The disaggregation of the main outputs of the TSA to the regional and sub-regional levels is achieved through the use of the business and visitor expenditure survey data.

The project compiles and analyses data which are produced within ONS and also data sourced externally. ONS data sources cover the measurement of the supply side of tourism (annual business survey, supply and use tables). On the demand side, the only component of tourists’ consumption measured within the ONS is the inbound expenditure of tourists. The consumption of overnight domestic tourism and the expenditure of domestic excursionists (or tourism day visits) are all collected from external suppliers.

For the supply side analysis, the methodology is following two distinct steps. The first step is to calculate the Gross Value Added of the Tourism Industries (GVATI) following the recommendations of the TSA methodology. The second step is to balance the GVA relating to the tourism industries within each region with the total supply of producers from the ONS Supply

and Use tables. This results in regional and sub-regional tourism GVA. This internal consistency is a key advantage of the methodology.

For the demand side analysis, calculating UK tourism consumption is more complex due to the numerous data sources that exist, and the fact that these sources change according to the component of the tourism consumption being considered. The only demand component measured in ONS is the expenditure of inbound visitors through the International Passenger Survey (IPS). The expenditure of domestic overnight visitors is contained in the UK Tourism Survey (UKTS) implemented by Taylor Nelson Sofres (TNS) and commissioned by the national tourist boards. Tourism day visits expenditure is measured by the English Leisure Visits Survey (ELVS) from 2005 which was commissioned by English Nature and the National Parks in England. These surveys are all available at the regional level.

The methodology then calculates a 'Tourism Ratio' for each region or sub region. This statistic is the result of dividing the total demand by total supply in each region. The tourism ratio represents a good measure of the economic importance of the tourism sector within regions, as it shows the relationship between tourism demand and supply.

The percentage figure for GVATI at the regional level reveals the relative importance of the tourism industries in terms of contributing to GVA within each of the regions. Results also show the spending related to inbound, domestic and domestic outbound tourism by region, and breakdowns by product type.

h. Other statistical initiatives

The final OECD Tourism Committee review should include other statistical initiatives:

Austria, Statistics Austria. Statistics Austria is working on the visualization of regional tourism data by interactive maps (i.maps). In regard to tourism, maps provide information on regional level, mainly in the context of accommodation statistics and Tourism Satellite Accounts. The visualization of data can be done at municipality level (about 1600), at tourism destination level (about 120) for a series of variables (e.g. overnights, average length of stay, market share, tourism intensity).

Chile, Ministry of Economy, Development and Tourism. Methodology developing an index of tourism concentration at subnational level, with detailed results shown on 15 different maps.

Finland, Metsähallitus Natural Heritage Services. The method calculates annually the local income and job benefits of visitor spending for all the 37 national parks, 7 hiking areas and some other protected areas that are important as tourism destinations. The local economic benefits are calculated by means of a method developed by Metsähallitus Natural Heritage Services and the Finnish Forest Research Institute (Metla). The method uses visitation numbers, visitor spending figures and multipliers describing the flow of money in the local economy. The

total income benefits to the local economy are the direct and indirect income impacts from visitor spending per year.

France, National Institute for Economic Studies and Statistics. The methodology developed since 2005 and approved in 2014 estimates the economic activity and employment generated through tourism in regions, based on seasonality, geographic and sector criteria. Rules to estimate the proportion of tourism-related employment depend of the typology of the communes and the touristic ratio.

Spain, Andalusia Tourism Government. Methodology allowing the measurement of the evolution of tourism towards sustainability at regional level. The indicator system allows measurement of 7 key areas - governance, territory, vulnerability, profitability, diversification, quality and innovation - and 40 key themes (e.g. territorial cohesion, competitiveness or product positioning). The system comprises more than 300 indicators.

Switzerland, Ministry of Economic Affairs. The methodology “International benchmarking programme for Swiss tourism” has been developed with BAK Basel in order to measure, analyse and compare the success and competitiveness of destinations and regions. The model builds on an online benchmarking analysis tool for tourism destinations and regions (BAK Destinationsmonitor) and on an index for measuring the success of destinations and comparing them with their international peers (BAK Topindex).

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