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Canadian Tourism Satellite Account, 2000

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Statistics Canada Statistique Canada

Canada

Canadian Tourism Satellite Account, 2000

This paper highlights the new Canadian Tourism Satellite Accounts (CTSA) developed by Statistics Canada. The CTSA provides an economic measure of the importance of tourism in terms of expenditures, Gross Domestic Product and employment for Canada. It permits a comparison of tourism with other industries within Canada since the concepts and methods used are based on the framework of the Canadian System of National Accounts. The study revealed that the importance of tourism increased in Canada and that international visitors have become increasingly more important to Canadian tourism since the publication of the first Tourism Satellite Account for the year 1988. This paper presents the results of the CTSA for reference year 2000.

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Symbols

The following standard symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s^	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^p^	preliminary
^r^	revised
x	suppressed to meet the confidentiality requirements of the Statistics Act
^E^	use with caution
F	too unreliable to be published

Canadian Tourism Satellite Account, 2000

By Conrad Barber-Dueck and Demi Kotsovos[1]

Executive Summary

- The period from 1998 to 2000 was a good one for Canadian tourism, as tourism Gross Domestic Product (GDP) jumped 15%.
- Tourism comprised 2.2% of total GDP in 2000, compared to 2.3% in 1998, making it a larger industry than agriculture (1.4%) and motor vehicle manufacturing (1.3%).
- Tourism spending rose to $53.7 billion in 2000, a 17% increase from 1998.
- A 15% increase in non-resident spending in Canada, pushed tourism exports up to $17.8 billion in 2000.
- Spending by Canadians in other countries also posted strong gains leaving the tourism trade deficit at $3.1 billion in 2000, almost unchanged from 1998.
- Tourism spending by Canadians in Canada grew strongly from 1998 to 2000, up 18%. The value of the Canadian dollar, which stood at 67 cents relative to its US counterpart, encouraged this domestic spending.
- Tourism employed 610 thousand people in 2000, 4.0% of all Canadian jobs. The accommodation industry (159 thousand) was the largest tourism employer.
- At $11.6 billion, the passenger air transportation commodity had the highest tourism spending. Accommodation and food and beverage services were the next most common commodities on which tourists spent their money.
- The merger of two Canadian airlines in 2000 hurt profits in the passenger airline industry. The effects dampened tourism GDP in that year.

1. *Demi Kotsovos and Conrad Barber-Dueck are economists with the Income and Expenditure Accounts Division, Statistics Canada. For further information, please call 613-951-3640 or email:iead-info-dcrd@statcan.ca.* *The authors wish to thank all involved for their invaluable support and assistance especially Chris Jackson, Marcel Beaudry, Chantal Rouvroy, Jennifer Hsu, Katharine Kemp, Jamie Temple and other staff members in the Income and Expenditure Accounts Division, Education, Culture and Tourism Division, Industry Measures and Analysis Division and Input-Output Division of Statistics Canada. Lastly, thanks to the Canadian Tourism Commission (CTC) who provided funding for the overall project.*

Introduction

The tourism satellite account (TSA) has become the internationally accepted framework by which to measure tourism activity in an economy. The Canadian TSA follows the TSA guidelines adopted by several international organizations including the United Nations Statistical Commission[2]. The World Tourism Organization (WTO) has indicated that over 45 countries around the world have either completed or are currently developing TSAs.

The Canadian TSA measures tourism in terms of expenditure, Gross Domestic Product (GDP) and employment. The TSA for the reference year 2000 measures these variables at a national level. Past TSAs, for the reference years 1996 and 1998, were calculated for all provinces and territories.

With this report, only tables for the year 2000 are included. No revisions were made to previous data except in the case of four employment series (air transportation, bus transportation, accommodation and travel agents). These estimates were revised back for all previous years[3]. Concepts, definitions, sources and methods are included in the appendix.

Tourism Registers Strong Growth from 1998 to 2000

The period from 1998 to 2000 were banner years for tourism in Canada. Tourism GDP[4] reached $22.4 billion up 15% from 1998. Tourism expenditures jumped over 17% during this time to $53.7 billion while tourism jobs increased by 7.5% to 610 thousand.

Strong growth was also recorded for the total Canadian economy during this time period with GDP advancing 18%. As a result, tourism's share of the total economy slipped slightly from 2.3% in 1998 to 2.2% in 2000.

The period from 1998 to 2000 was marked by low values for the Canadian dollar relative to its counterpart in the United States, helping to spur tourism in Canada. The average exchange rate for the period was 67 cents. Overnight visits from the U.S. were up 2.0% in this time period while trips from tourists from other countries rose 11%. Conditions within Canada also propelled tourism as personal disposable income per person jumped 11%.

The merger of two domestic air carriers in Canada during this period affected tourism output. This event, along with a strong increase in fuel prices, pushed down profits in the air transportation industry. In fact, the 22% decline in "other income" for air transportation, (see Appendix F) which includes profits, dampened GDP growth for the total tourism industry. Excluding air, other income rose 22% (as opposed to 15% with air). If other income in air transportation had held steady, tourism would have continue to represent 2.3% of the total economy.

Table 1: Tourism GDP by industry, Canada, 2000 and 1998

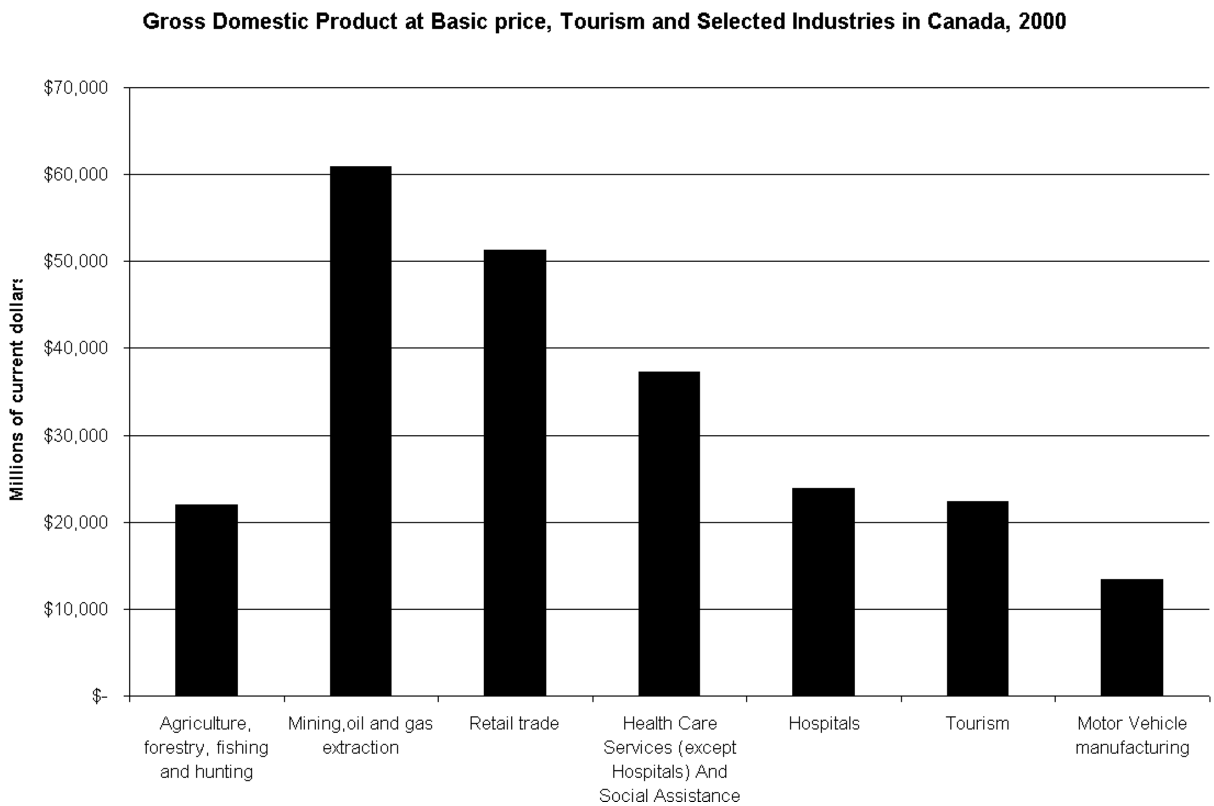
	Tourism GDP		Growth	Distribution	
	2000	1998		2000	1998
	$ millions		%	%	
Transportation	5,954	5,267	13.0	26.6	27.1
Accommodation	5,246	4,683	12.0	23.4	24.1
Food services	2,691	2,335	15.3	12.0	12.0
Other tourism industries[1]	3,466	2,915	18.9	15.5	15.0
Total tourism industries	**17,357**	**15,199**	**14.2**	**77.5**	**78.1**
Other industries[2]	5,050	4,263	18.5	22.5	21.9
Total tourism GDP	**22,407**	**19,462**	**15.1**	**100.0**	**100.0**

1. *Includes recreation and entertainment services and travel agency industries.*
2. *Includes non-tourism industries that benefit from tourism (eg. Retail trade). These industries produce some commodities bought by tourists. These commodities include: groceries, alcoholic beverages from stores, pre-trip expenses, motor vehicle parts and repair, motor vehicle fuel, toiletries etc.*

2. *See Tourism Satellite Account – Recommended Methodological Framework. Organization for Economic Co-operation and Development, the Statistical Office of the European Community, the United Nations and the World Tourism Organization, May 2001.*
3. *Estimates for previous years were revised back to 1986 in the National Tourism Indicators for these series. Data for these years can be obtained from Statistics Canada by request.*
4. *All references to GDP are at "basic prices" (see Appendix A). All growth rates of dollar denominated series are in nominal terms.*

Tourism is an important part of Canadian economy

Tourism is an important part of Canada's well diversified economy. Its contribution to the Canadian economy (2.2%) parallels the combined contribution of agriculture, fishing, forestry and hunting (2.3% combined). In fact, the motor vehicle manufacturing industry which includes the production of cars, trucks and buses, represented 1.3% of Canada's economy. In terms of employment, tourism contributed the same of number of jobs (610 thousand) to the economy as did agriculture and mining and equalled the number of jobs in the health care and social assistance industry.



Low dollar changes spending patterns

The low value of the Canadian dollar changed the spending patterns of travellers in Canada in the 1998 to 2000 time period. Transportation and accommodation industries, accounted for half of tourism GDP, down slightly from 1998. The third largest share (23%) of the tourism GDP was generated from industries that are not considered as tourism industries. These industries[5] produce goods and services such as grocery products, clothing, tobacco products, and other retail goods that are bought by tourists. The low value of the Canadian dollar relative to its US counterpart was a factor in the increase in output for these industries, making shopping more attractive. Over 16% of tourism expenditures were made on non-tourism commodities in 2000, up from 15% in 1998 (see Table 2).

Canadians travelling in Canada

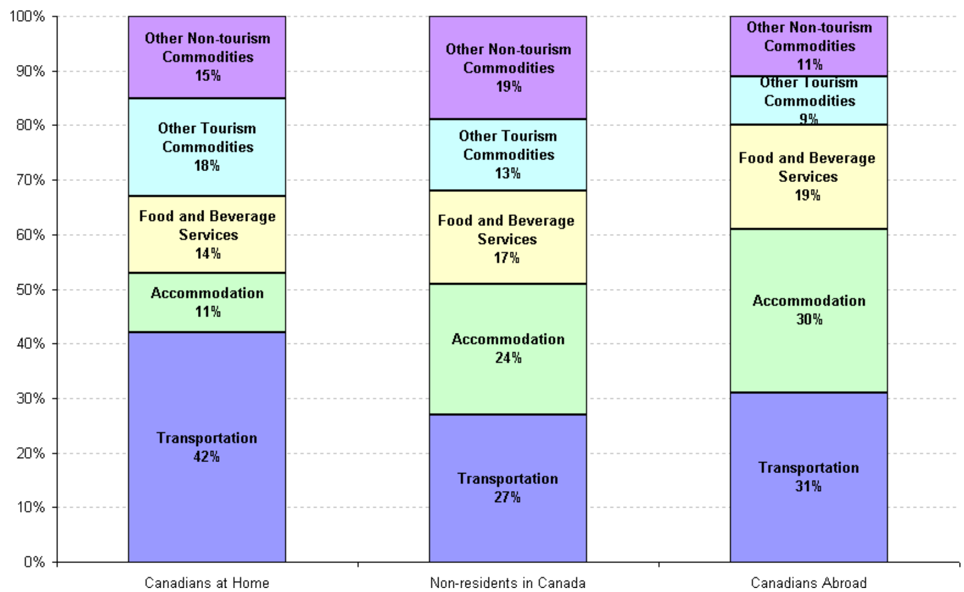
Canadian tourism spending in Canada registered large gains in the 1998 to 2000 time period. Encouraged to stay in their own country as a result of a low Canadian dollar, Canadians spent $35.9 billion in 2000 travelling in

5. These industries, though they sell goods and services bought by tourists, are not considered tourism industries since a significant portion of their total sales is not attributable to tourism.

Canada, up 18% from 1998. This was 5% higher than the spending increase of Canadians travelling abroad. Canadian tourism spending in Canada represented nearly 67% of total tourism spending.

Transportation was the largest component of tourism domestic spending at $15.1 billion or 42% of the total tourism expenditure, a consequence of the vast geography of the country and increases in fuel prices during this time. Air transportation at 24% of the total tourism expenditure was the key component within the transportation category. At $6.5 billion or 18%, other tourism commodities composed of recreation and entertainment, travel agency service and pre-trip expenses had the second largest share of tourism expenditures. Expenditures on accommodation by Canadian tourists had the lowest share of tourism expenditures at 11%.

Tourism Expenditures by Canadians and non residents, 2000



Non-residents Travelling in Canada

Non- residents accounted for $17.8 billion worth of tourism spending in Canada, up 17% from 1998. Over half of this spending was on Transportation and Accommodation. Unlike Canadian travellers who spent most of their travel budget on transportation and less on accommodation, travellers from outside Canada spent 24% of their budget on accommodation. Generally, travellers from other countries are more likely than domestic tourist to spend nights in paid accommodation. They also differed from Canadians in that they spent more on food and beverage service and on “other commodities”.

Canadians continue travelling abroad

In 2000, Canadians spent $20.9 billion on tourism abroad, up 13% from 1998. Canadians spent more travelling outside Canada than foreigners spent in Canada. The net tourism trade balance was negative $3.1 billion down slightly from the $3.0 billion deficit posted 1998. The net tourism balance compares the amount Canadian spent abroad on tourism against what non-residents spent in Canada. The lure of warm weather in the winter contributed to the deficit as Canadians continued to travel despite the value of the dollar relative to its US counterpart.

Canadians travelling abroad had a higher share of accommodation spending to total tourism expenditures than did Canadian travellers who stayed in Canada. Canadians abroad spent a higher share on transportation and accommodation than did non-residents coming to Canada. Canadians also shopped less than non-residents as they spent almost a $1 billion less on other tourism commodities abroad than foreigners spent here.

Tourism's importance in the Service economy

In 2000, service producing industries encompassed 65% of the total Canadian economy. Tourism comprised 3.4% of total service GDP in Canada. The largest service industry is finance, insurance and real estate (28%) followed by health care and social assistance (9.2%). Retail and wholesale trade are each just over twice as large as tourism in terms of GDP. It is similar in size to the accommodation and food services industries (combined) and the administration and support industry.

Tourism also plays an important role in the international trade of services in Canada. In 2000, Canada's exports of service totalled $61.3 billion of which 29% were the export of tourism services. Business service exports were the largest at $31 billion. Tourism, at $17.8 billion was second, well ahead of transportation services, which recorded $11 billion of exports in 2000.

Canada's imports of services for 2000 reached $66.4 billion. Of this, 32% were Canadian tourism imports. Business services registered the largest level of imports at $32 billion. Tourism was the next largest import category.

Between 1998 and 2000, Canada's export of services grew by 18% and its import of services by 16%. During the same period, Canada's tourism exports and imports of services expanded at a slightly slower pace. Tourism export of services rose 15% whereas tourism import of services increased 13%.

Tourism Spending in Canada

Tourism spending in Canada rose to $53.7 billion in 2000, up 17% from 1998. Spending on transportation reached $19.9 billion or 37% of the total tourism expenditure, the most of any commodity. Air transportation at 22% of the total tourism expenditure was the key component within the transportation category. At $8.8 billion or 17%, other tourism commodities composed of recreation & entertainment, travel agency service and pre-trip expenses has the second largest share of tourism expenditures. Expenditures on accommodation expenditures increased 9.0% from 1998 to reach $8.3 billion.

Table 2: Tourism spending by commodity, Canada, 2000 and 1998

	Tourism spending		Growth	Distribution	
	2000	1998		2000	1998
	$ millions		%	%	
Passenger transportation	19,981	17,087	16.9	37.2	37.2
Of which:					
passenger air transportation	11,597	10,513	10.3	21.6	22.9
use of private vehicle	5,566	4,097	35.8	10.4	8.9
Accommodation	8,277	7,590	9.0	15.4	16.5
Food and beverages services	7,930	6,864	15.5	14.8	15.0
Other tourism commodities[1]	8,875	7,471	18.8	16.5	16.3
Total tourism commodities	**45,063**	**39,013**	**15.5**	**83.9**	**85.0**
Other spending[2]	8,674	6,874	26.2	16.1	15.0
Total tourism expenditures	**53,737**	**45,887**	**17.1**	**100.0**	**100.0**

1. *Includes spending on recreation and entertainment, travel agency services and pre-trip expenses*
2. *Includes spending by tourists on non-tourism goods and services (groceries, alcoholic beverages purchased at retail, souvenirs, local public transportation, parking, etc.)*

The surge in tourism spending from 1998 to 2000 continues a trend established early in the 1990's in Canada. Tourism expenditures jumped by 35% from 1996 to 2000. Exports of tourism spending, which advanced 39% in this period, were the chief factor in this gain.

Employment surges forward

Tourism generated 610 thousand jobs and contributed 4.0% to total employment in 2000. This was up 7.8% from 1998[6]. Tourism activity provided the most jobs to the accommodation industry (159 thousand) and food and beverage was a close second accounting for 143 thousand jobs. About 20% of these jobs benefited non-tourism industries (industries that produce goods and services bought by tourists). Tourism activity in these industries created 119 thousand jobs[7].

Table 3: Tourism Employment by industry, Canada, 2000 and 1998

	Tourism Employment		Growth	Distribution	
	2000	1998		2000	1998
	'000		%	%	
Transportation	85.5	80.8	5.9	14.0	14.3
Accommodation	159.4	154.5	3.2	26.1	27.3
Food services	143.2	126.5	13.2	23.5	22.4
Other tourism industries[1]	102.9	95.0	8.3	16.9	16.8
Total tourism industries	**491.0**	**456.8**	**7.5**	**80.5**	**80.7**
Other industries[2]	119.0	109.1	9.1	19.5	19.3
Total tourism Employment	**610.0**	**565.9**	**7.8**	**100.0**	**100.0**

1. *Includes recreation and entertainment services and travel agency industries.*
2. *Includes non-tourism industries that benefit from tourism (eg. Retail trade). These industries produce some commodities bought by tourists. These commodities include: groceries, alcoholic beverages from stores, pre-trip expenses, motor vehicle parts and repair, motor vehicle fuel, toiletries etc.*

Tourism's contribution to "tourism industries"

Tourism's largest impact is on the travel agency services. These activities are the most reliant on tourism, with 91% of this industry's economic activity coming from tourism. Other key tourism activities most affected by tourism are air transportation and accommodation. For the air transportation industry, tourism accounted for 78% of that industry's GDP. The remaining portion of the industry was mostly involved in the carrying of freight. Tourism accounted for 66% of the economic activity in the accommodation industry. This industry also produced restaurant services and recreation services that have lower tourism ratios than the accommodation commodity, chiefly produced by this industry.

Tourism's contribution to "non-tourism industries"

Tourism does not only benefit industries that are identified as "tourism industries", such as transportation or accommodation (see appendix C for complete list). There are various industries that produce goods and services that are purchased by tourist such as groceries, souvenirs and other retail goods. Tourist spent $8.7 billion buying such goods and services. This was up 26% from 1998. In fact in 2000, tourist spent more on these commodities (16% of total tourism spending) than they did on accommodation.

These "other industries" accounted for 22.5% of tourism GDP. Tourism generated 119 thousand jobs within these industries with an average annual wages of 29,200. Most of the spending within this "other industries" occur in the retail and wholesale trade industries, particularly those related to camping trailers, tobacco, men's & women's clothing, and vehicle fuel.

6. *The employment series was the only one revised for 1998. New data sources were incorporated thereby increasing estimates for four industries (air and bus transportation, accommodation and travel agents). The revised employment data is available on request from Statistics Canada.*
7. *Statistics Canada is developing a Human Resource Module that will provide timely and reliable statistics on the human resource dimension of tourism. It will enhance the analytical capacity provided by the Canadian TSA and the National Tourism Indicators by presenting a snapshot of an industry and the occupations with it.*

Conclusion and Future Work

The Canadian TSA for 2000 highlights that tourism continues to be an important part of the Canadian economy both in terms of output (GDP) and employment. Its contribution surpasses other important industries such as motor vehicle manufacturing. Tourism is a major contributor to the trade of services with other countries, representing approximately 30% of these transactions. Tourism also benefits “non-tourism” industries, such as retail trade.

Results of the Canadian TSA for 2000 were incorporated into the National Tourism Indicators (NTI) during the first quarter 2005 revision[8] and will be integrated into the forthcoming Human Resource Module.

Considerable work has been done in reviewing current Canadian tourism statistics[9]. This work provided several recommendations for the TSA in Canada. An updating of concepts, definitions, commodities and industries to be included in the Account was recommended. To fit into the newly adopted revision policy of tourism statistics, these recommendations would best fit into an historical revision of the tourism statistics[10]. This historical revision will occur after the new definition of tourism has been integrated into the domestic travel survey of Canada[11]. The next TSA (or PTSA) will incorporate these changes.

8. See National Tourism Indicators, catalogue no.13-009-XPB, Quarterly estimates, first quarter 2005, Statistics Canada.
9. See “Study of the Canadian Tourism Satellite Account: CTC Strategy Paper, Phase II”, Katharine Kemp and Shaila Nijhowne, May 31, 2005.
10. See “Revisions of the Canadian National Tourism Indicators”, catalogue no.13-604-MPE no.47, Statistics Canada.
11. The new definition of tourism used in the Travel Survey of the Residents of Canada (TSRC) conducted by Statistics Canada will be changed to include all “out of town visits” overnight and same-day visits over 40 kilometers from home.

Appendices

Appendix A: **Concepts and Definitions Used in the Canadian Tourism Satellite Account**

Appendix B: **Sources and Methods for the Canadian Tourism Satellite Account**

Appendix C: **Tourism Industries for the Canadian Tourism Satellite Account**

Appendix D: **Tourism Commodities of the Canadian Tourism Satellite Account**

Appendix E: **Tourism expenditures, Canada, 2000**

Appendix F: **GDP and Employment for Tourism and Non-tourism Industries, Canada, 2000**

Appendix A: Concepts and definitions used in the Canadian Tourism Satellite Account

Concepts

The Canadian Tourism Satellite Account (CTSA) is based on the accounting principles of the System National Accounts. This internationally recognised system is an integrated framework of statistics that allows for the measurement of a country's economic production. It outlines the structure of the economy and the contribution of each industry.

Satellite accounts, such as the CTSA, have the structure and principles of the national accounts but are developed as an extension to the national accounts system - thus the name "satellite". The subject matter of the satellite account usually can not be explicitly found in the core account and thus a special calculation is required. Satellite accounts tend to focus on specific aspects, be it social or economic, such as tourism, transportation, or environment. Their presentation and adherence to national accounting principles allows an analyst to compare the satellite account (or area of interest) with the entire economy as measured by the SNA. With the tourism satellite account, one can therefore answer the question, how important is tourism in Canada.

For the tourism satellite account, the Input-Output tables in the SNA are particularly important. These tables measure and analyse productive activity in the economy focusing on the producers and purchasers of commodities within the various industries. They show the total output and use of commodities by industries, as well as the primary costs (or inputs) associated with production of the commodities. As mentioned earlier, tourism is not an industry identified within the SNA. It is dependent on the consumer's purchases as a tourist, rather than on the production of certain goods and services. Constructing the CTSA, therefore, requires splitting industries into their tourism and non-tourism components. By aggregating the value added for the each tourism component, tourism GDP may be calculated.

Definitions

At the core of the CTSA is the definition of tourism. **Tourism** is currently defined as "the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes". This is the definition adopted by the World Tourism Organisation and the United Nations Statistical Commission. The definition is broad in that both personal and business travel are included in tourism. It also does not precisely define the notion of usual environment, thereby allowing a country to apply the tourism concept to its own specifications. For operational purposes, Canada has defined the concept of outside the **"usual environment"** as greater than 80 kilometres one way from home. Several important exceptions are made to the definition. Commuting, travel for education, by armed forces, and diplomats as well as migration are not included in the estimates. On the other hand, crossing an international boundary is considered tourism no matter the distance travelled.

Tourism consists of a mix of industries and parts of industries and the various commodities they produce. An industry is a grouping of establishments that provide similar commodities to businesses and persons. A **tourism industry** is defined as an industry that provides tourism commodities to visitors and would cease to exist without tourism or would continue to exist only at a significantly reduced level of activity (see Appendix C for a list of tourism industries). A **tourism commodity** is a good or service for which a significant part of its total demand comes from visitors (see Appendix D for a list of tourism commodities). Therefore, air passenger transportation would be a tourism commodity, while groceries, although occasionally bought by tourists, is considered a non-tourist commodity. Most tourism commodities are purchased while travelling, however, an exception is made for goods and services bought solely for the purpose of travel (e.g. motorised mobile homes, tent trailers and luggage). The list of commodities and industries used in this CTSA has not been modified from the original list used in the first CTSA[1]. This list needs to be reviewed to include any new products or emerging industries such as travel insurance, second homes, spa holidays etc. This review is a priority and will be incorporated with the next

1. *The definition for a tourism commodity and tourism industry is based on the National Task Force on Tourism Data, Final Report (March 1989, Statistics Canada).*

CTSA, which will include an historical revision of the data. This revision was not completed for this Account but delayed until the next release so that the new definition of tourism could be included[2].

Another important factor in the construction of the CTSA is the definition of **tourism supply**. This is the total production of the commodities bought by **tourists**[3] and non-tourists. Interestingly, the supply of a tourism commodity can and usually does exceed tourism demand as defined in the CTSA. This is because tourism supply includes the total production of a tourism commodity whether it was purchased by a tourist or a non-tourist. For example, 100 units of accommodation services, a tourism commodity, may be produced within a given region. However, only 90 of these units may be attributable to tourism activity. Thus, tourism supply for accommodation service, which in this example equals 100, is not equal to tourism demand (90 units). The ratio of tourism demand to supply is useful in identifying the proportion of a tourism commodity that is actually purchased by tourists. It also provides important information for the conversion of commodity data into an industry format. The ratio is also useful in the data validation process especially in the reconciliation of demand and supply estimates, and in estimating the share of an industry's employment that is generated by tourism. (For further details see the methodology in Appendix B).

Tourism demand, as mentioned above, is defined as total spending by tourists. Total tourism demand can be split into two components domestic demand, and international demand. Domestic demand includes the expenditures associated with tourism activity within Canada by Canadian residents. In the case of air transportation, the domestic portion of a flight destined to a location outside the region is also included in domestic demand. International demand, which can also be described as exports, consists of the expenditures from non-residents in Canada on tourism. Business, government and personal tourism expenditures are included for all types of demand. The CTSA also calculates international tourism imports which are expenditures by Canadians outside Canada.

Tourism GDP can be defined as the unduplicated value of production, within the boundaries of a region (i.e. Canada), of goods and services purchased by tourists. In the CTSA, GDP is calculated at basic prices as opposed to market prices. Only direct GDP, as opposed to indirect and induced GDP, is measured. Indirect GDP refers to the downstream effects of economic activity. Although these indirect effects are important, they are beyond the scope of the CTSA. GDP can be calculated as (i) the sum of incomes or (ii) expenditures or (iii) the sum of value added. In the case of tourism, the sum of income approach is used. The components include wages and salaries, supplementary labour income, mixed income and other operating surplus (including profit and depreciation) as well as adds some taxes on production (such as property and payroll taxes, but not federal or provincial sales taxes), and subtracts some subsidies (such as labour-related subsidies, but not product-related subsidies).

Tourism employment is the sum of all employees contributing to tourism production. It consists of both full-time and part-time employment and thus, is not calculated as full-time equivalents. Self-employed persons, employees and unpaid family workers comprise tourism employment. Again, as in the case of GDP, only direct employment is included as opposed to indirect and induced employment.

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2. *The definition of tourism has been changed in the new domestic travel survey to include same day trips of 40 kilometers from home instead of the current 80 kilometers. All overnight "out of town" trips will also be included in the tourism estimates.*
3. *In this article, the term tourist also includes same-day visitors.*

Appendix B: Sources and Methods for the Canadian Tourism Satellite Account

Data Sources

Several main data sources are used for the CTSA. Demand estimates are derived from two main sources, the Canadian Travel survey (CTS) and the International Travel Survey (ITS), both conducted by Statistics Canada. The CTS provides data for domestic business and personal tourism expenditure by province and territory. It also supplies information that identifies the reasons for visiting a region, the duration of stay and the activities undertaken while at the tourist location. The survey is a monthly supplement to the Labour Force Survey (LFS). The CTS provides totals for tourism expenditure, within a given region, as well as inter-provincially (inter-provincial exports and imports). The CTS, however, does not provide travel origin data for the territories, only travel destinations are available. Information from air transportation origin and destination statistics and Statistics Canada's Survey of Household Spending (SHS) along with Input-Output supply data, are used to fill this gap. Data for pre-trip expenses, a portion of domestic demand, used trade and manufacturing data.

The ITS provides estimates for non-resident demand (separately for the US and other countries) within Canada as well as imports of tourism (Canadian spending abroad). This survey was initially conducted to provide data for Canada's Balance of Payments with other countries.

Estimates for tourism supply are derived from Statistics Canada's Input-Output system; as are GDP and its components, labour income, mixed income and operating surplus. The Input-Output system is constructed using several large matrices of data that record the inputs (what is needed to make a good or service) and output (the goods and services provided) of 300 industries using 727 commodities. Since 2000 data was used, the industries match the North American Industry Classification Systems (NAICS). The inputs show the supply of various commodities by industry and therefore tourism supply can be calculated using this data. The I-O system also provides a matrix of value added or GDP. Employment data is found in Statistics Canada's Labour Productivity Database. As its name suggests, this database provides measures of productivity using data from the Statistics Canada's Labour Force Survey (LFS) and the Survey of Employment, Payroll and Hours (SEPH). The labour database uses the same industry classification system as I-O thereby allowing for a straightforward match between the two sets of data.

Methodology

The goal of the CTSA is to measure the economic activity of tourism, including tourism GDP, employment, demand and supply. To do this, the CTSA takes demand data from the tourism surveys (i.e. the CTS and the ITS) and calculates its contribution to GDP and employment. However, the source data for tourism is dissimilar in that some is based on commodity detail while other sources are based on industry detail. That is, demand data from the CTS and ITS are built up using commodity details while GDP and employment data use industry breakdowns. Thus, a link needs to be made between commodities and industries. Supply, which can be calculated using either commodity or industry detail, is the linking factor between these variables. A demand/supply ratio, as discussed below, can be calculated for each commodity. This ratio is then moved into the industry framework so that tourism GDP and employment can be estimated using the information provided by the demand surveys.

Supply

The starting point for the calculation of supply is the Input-Output (I-O) system, which gives a detailed accounting of all the industries in the economy and the commodities they supply. The first step for the CTSA is to discern the industries that supply tourism commodities to visitors (see appendix C for a complete list of tourism industries). However, the industry categories provided in the published Input-Output system are not detailed enough for the CTSA[4]. For example, the I-O system displays industry estimates only for the total food and beverage industry. The CTSA needs to split this industry, using information from I-O detailed calculations, into sub-industries since some of these sub-industries may not be included in the tourism account. For example, two sub-

4. The Input-Output "W" or worksheet level data is not detailed enough.

industries within the food and beverage industry are take-out food restaurants and caterers. Take-out food restaurants are considered a tourism industry and their supply is included in the estimate. Caterers are omitted since they are a non-tourist industry. Similarly, only tourism commodities remain in the calculation of total supply. In other words, only those commodities in the take-out food industry that are purchased by tourists are retained (e.g. meals) while non-tourist commodities are taken out (e.g. royalties).

After the tourism sub-industries and tourism commodities have been identified, supply shares are calculated. The supply shares are equal to a sub-industry's portion of the total output for a commodity within an industry. For example, if two sub-industries each provided one half of an industry's supply of meals, then the supply shares would equal 50% for these commodities for each sub-industry. These shares are used later to allocate demand by industry. It should be noted that taxes were added to all supply estimates obtained from the Input-Output system to move the data from producer prices to purchaser prices, thereby matching the pricing used for the demand data.

A special calculation was made for travel agencies. Commissions on travel arrangements and tour packages are used for the output of this industry. This data is not specifically calculated in the travel surveys and so an adjustment is made for them in the CTSA.

Demand

The calculation for tourism demand in the CTSA began with the survey data in the CTS and the ITS. The first step was to split the existing commodity detail provided in the surveys into the detail used in the Input-Output system in order to allow appropriate demand / supply reconciliation. For some commodities, the existing survey data did provide appropriate detail. For example, information for the transportation commodities was sufficient to split these commodities into their I-O counterparts. For accommodation, information on nights spent in different types of accommodation was available from the survey and was used to split the commodities into the I-O classifications. Personal expenditure data from the National Accounts was used to split the remaining commodities into the I-O framework.

Once tourism demand was calculated using the same commodities as supply, supply shares were used to allocate the demand into sub-industries. As mentioned above, if 50% of meals was supplied by a sub-industry, this sub-industry would also be allocated 50% of demand. After the demand data was distributed across industries, demand/supply ratios were then calculated for each industry. These ratios are simply the total tourism demand of an industry divided by its total tourism supply. This ratio indicates what portion of an industry's output can be attributed to tourism activity. Thus, if an industry demand / supply ratio equals 40%, this share of the industry's total output comes from tourism. These demand/supply ratios will later be used to calculate tourism GDP and employment. As noted above, tourism supply is larger than tourism demand because it includes the total supply of a tourism industry, rather than just the portion that is attributable to tourism.

To increase the analytical capabilities of the data, demand was split into domestic demand and non-resident demand (exports) using information from the CTS and ITS. Export estimates were made for international exports of tourism. Data was also calculated for international imports. The availability of both export and import data allowed for the calculation of tourism trade balance.

Several additions were made to the survey data to provide a more complete estimate of tourism demand (see Table B1). The first of these additions was to include the domestic portion of international trips since this spending is not included in the published CTS estimates. The domestic portion is the Canadian leg of a trip to an international destination. For example, in the case of a person flying to New York from Winnipeg through Toronto, the spending associated with the Winnipeg to Toronto portion of the trip was added to the published survey data. Further, if the international leg of the trip is provided by a domestic carrier, this too is included in the domestic demand total since the service is produced domestically.

Another calculation was made to include domestic tourism spending in the territories since travel origin data, or tourism spending of residents within their own territory, was not included in the CTS survey. Supply data was available for these commodities. Total demand data was calculated using the national average for demand/supply ratio and multiplying it by total supply for each tourism commodity in the territories. International and inter-provincial demand was then removed from this total leaving only domestic or intra-provincial demand for the territory. The Survey of Household Spending (SHS) and origin and destination air passenger statistics were also used as indicators for demand.

Table B1: Reconciliation of Travel Surveys and CTSA Tourism Demand, Canada, 2000

	1998	2000
	$ millions	
Tourism Expenditures as per (CTS & ITS)	**36,345**	**44,314**
Domestic Portion of International Trips	290	335
Canadian Fares of International Trips	4,323	5,341
Domestic Demand (Territories)	61	126
Tips	271	233
Travel Agent Commissions	1,794	1,907
Pre-Trip Expenditures	1,515	1884
Demand to Supply reconciliation	1,288	-403
Total Adjustments	**9,542**	**9,423**
Total Tourism Demand (CTSA)	**45,887**	**53,737**

In previous years, tips were added to the domestic demand estimates of accommodations and restaurants since they were not explicitly captured in the travel surveys. However with the 2000 CTSA this adjustment is no longer necessary as tips are now covered in the travel surveys. Tips are still added to the ITS data.

Pre-trip expenses or spending made by a traveller before a trip but for the sole purpose of travelling was another important addition made. These expenses include motor homes, travel and tent trailers, luggage and travel sets, tents and camping equipment and sleeping bags.[5] The commodities included in pre-trip expenses were calculated using a supply and disposition method. Total exports of these goods were subtracted from total supply (including imports and items manufactured) of these items to obtain total disposition for Canada. Total units of each of these items were then multiplied by the appropriate Input-Output price to get total revenues for pre-trip expenses.

A final adjustment to the data arose from the demand/supply reconciliation. As commodities were reconciled between demand and supply, the ratio of tourism demand to supply for a given commodity was examined. This ratio was at times considered too high or too low. This was particularly true for commodities for which little spending occurred. These issues were treated on a case-by-case basis. For example, by adding the information from the two travel surveys with the domestic portion of international trips, total air transportation demand might have reached only 80% of total supply. The non-tourism exclusions to air travel demand could not account for this 20% difference. Therefore, the 80% total was adjusted upward to reflect a more accurate tourism demand/supply ratio for air transportation. In some cases, tourism demand exceeded supply for a given commodity. The supply and demand estimates were then examined to see which was of higher statistical quality and an adjustment was made based on this information.

GDP

Tourism GDP and its components, labour income, mixed income and other operating surplus, were obtained from the input table of the Input-Output system. GDP was again calculated by sub-industry, just like supply either through information obtained for the sub-industries or, if no information existed, allocated by supply shares. The

5. *These commodities were often identified by a number of international organizations (such as the OECD) as single-purpose tourism goods.*

demand/supply industry ratios were then used to calculate tourism GDP. In other words, if the demand/supply ratio for a given industry was 50%, one half of the industry's GDP was allocated to tourism. This method also allowed for the calculation of tourism labour income, mixed income and operating surplus associated with tourism.

A special calculation was made to derive GDP for the "other industries". These "other industries" (such as retail trade) are defined as non-tourism industries, or industries that do not meet the criteria for tourism industries but obtain some benefit from it. In other words, they produce some commodities bought by tourists. These commodities include groceries, alcoholic beverages from stores, pre-trip expenses, motor vehicle parts and repair and motor vehicle fuel and some other miscellaneous commodities (e.g. toiletries). I-O personal expenditure data were used to distribute these values across I-O commodities. These data were then moved into an industry framework using shares of output for these commodities. The totals were then multiplied by input shares so that the GDP components could be isolated.

Employment

Like GDP, employment is calculated at the industry level. Therefore, the employment calculation used the same industry ratios as GDP to calculate the tourism portion of each industry. Thus, if the demand/supply ratio for an industry was 50%, half of this industry's employment was allocated to tourism. This calculation was done for all tourism-related industries and then the shares were summed to arrive at total tourism employment within Canada. As mentioned before, employment data by industry was found in Statistics Canada's Labour Productivity Database. The employment data were again available only at an industry level too aggregated for the CTSA. Wages and salaries, from the GDP calculation, were used to allocate employment across the sub- industries.

Appendix C: Tourism Industries for the Canadian Tourism Satellite Account

(1997 NAICS)

Air Transportation

- 4811 - Scheduled air transport
- 4812 - Non-scheduled air transport

Rail Transportation

- 4821 - Rail transportation

Water Transportation

- 4831 - Deep Sea, Coastal and Great Lakes Water Transportation
- 4832 - Inland Water Transportation

Bus Transportation

- 4851 - Urban Transit Systems
- 4852 - Interurban and Rural Bus Transportation
- 4854 - School and Employee Bus Transportation
- 4855 - Charter Bus Industry
- 4859 - Other Transit and Group Passenger Transportation

Scenic and Sightseeing Transportation

- 4871 - Scenic and Sightseeing Transportation, Land
- 4872 - Scenic and Sightseeing Transportation, Water
- 4879 - Scenic and Sightseeing Transportation, Other

Taxicabs

- 4853 - Taxi and Limousine Service

Vehicle rental and leasing

- 5321 - Automotive Equipment Rental and Leasing

Hotels

- 7211 - Traveller Accommodation (except 721114-Motels and 721198- All Other Traveller Accommodation)

Motels

- 721114 - Motels

Camping

- 721211 - RV (Recreational Vehicle) Parks and Campgrounds

Other Accommodation

- 721212 - Hunting and Fishing Camps
- 721213 - Recreational (except Hunting and Fishing) and Vacation Camps
- 721198 - All Other Traveller Accommodation

Food and Beverage Services

- 7221 - Full-Service Restaurants
- 7222 - Limited-Service Eating Places
- 7224 - Drinking Places (Alcoholic Beverages)

Recreation and Entertainment

- 51213 - Motion Picture and Video Exhibition
- 7111 - Performing Arts Companies
- 7112 - Spectator Sports
- 7115 - Independent Artists, Writers and Performers
- 7121 - Heritage Institutions
- 7131 - Amusement Parks and Arcades
- 7132 - Gambling Industries
- 7139 - Other Amusement and Recreation Industries

Travel Services

- 5615 - Travel Arrangement and Reservation Services

Appendix D: Tourism Commodities of the Canadian Tourism Satellite Account

Transportation

- Passenger air
- Passenger rail
- Passenger water
- Interurban, charter and tour bus
- Taxis
- Vehicle rental
- Vehicle repairs and parts
- Vehicle fuel

Accommodation

- Hotels
- Motels
- Camping
- Other accommodation (includes outfitters, commercial cabins and cottages)

Food and beverage services

- Meals from accommodation
- Meals from restaurants
- Alcoholic beverages from accommodation
- Alcoholic beverages from restaurants
- Meals and alcoholic beverages from other tourism industries

Other tourism commodities

- Recreation and entertainment
- Travel agency services
- Convention fees
- Pre-trip expenditures (include tents, camping goods, sleeping bags, luggage, travelsets, motor homes, trailers and semi-trailers of the caravan type for camping)

Non-tourism commodities purchased by tourists

- Groceries
- Beer, wine & liquor from stores
- Urban transit & parking
- Miscellaneous commodities (includes tobacco products, clothing, maps, and souvenirs)

Appendix E: Tourism Expenditure by Commodity, Canada, 2000

Commodities	Domestic Demand (1)	International Demand (Exports) (2)	Total Demand (3)=(1)+(2)	Total Domestic Supply (4)	Tourism Supply Share (%) (5)=(3)/(4)	Tourism Spending Abroad (International Imports) (6)
		millions of dollars				
Passenger air	8,646.7	2,950.7	11,597.4	12,214.5	94.9	...
Passenger rail	131.4	118.8	250.3	266.9	93.8	...
Passenger water	110.0	174.5	284.4	301.1	94.5	...
Interurban, charter and tour bus	401.7	314.3	715.9	760.5	94.1	...
Taxis	117.0	74.2	191.1	1,488.8	12.8	...
Vehicle rental	823.2	552.7	1,375.9	1,994.1	69.0	...
Vehicle repairs and parts	803.5	94.3	897.8	12,844.0	7.0	...
Vehicle fuel	4,104.8	563.4	4,668.2	21,572.7	21.6	...
Total Transportation	**15,138.2**	**4,842.9**	**19,981.1**	**51,442.5**	**38.8**	**6,458.4**
Hotels	2,845.2	2,959.3	5,804.6	6,340.3	91.6	...
Motels	446.2	689.8	1,136.0	1,198.1	94.8	...
Camping	303.0	136.9	439.9	463.7	94.9	...
Other accommodation	400.4	496.2	896.6	1,001.5	89.5	...
Total Accommodation	**3,994.8**	**4,282.3**	**8,277.0**	**9,003.7**	**91.9**	**6,227.3**
Meals from accommodation	471.2	303.1	774.3	2,327.4	33.3	...
Meals from restaurants	3,473.1	1,893.9	5,367.1	28,044.3	19.1	...
Alcoholic beverages from accommodation	220.2	152.3	372.5	1,584.3	23.5	...
Alcoholic beverages from restaurants	628.3	474.1	1,102.3	6,015.3	18.3	...
Meals and alcoholic beverages from other tourism industries	198.1	116.0	314.1	1,604.9	19.6	...
Total Food and Beverage Services	**4,990.9**	**2,939.4**	**7,930.3**	**39,576.2**	**20.0**	**3,992.1**
Recreation and entertainment	1,713.3	2,112.2	3,825.5	15,861.9	24.1	1,926.9
Travel agency services	2,776.7	224.8	3,001.5	3,027.8	99.1	...
Convention fees	108.9	54.8	163.8	173.8	94.2	...
Pre-trip expenses	1,884.1	0.0	1,884.1	1,884.1	100.0	...
Total Other Tourism Commodities	**6,483.0**	**2,391.8**	**8,874.8**	**20,947.5**	**42.4**	**1,926.9**
Groceries	1,321.0	759.4	2,080.5	56,546.6	3.7	...
Beer, wine and liquor from stores	279.3	151.0	430.2	11,659.5	3.7	...
Urban transit and parking	104.7	72.8	177.5	1,908.2	9.3	...
Miscellaneous commodities	3,612.6	2,372.9	5,985.5	1,914,409.2	0.3	...
Total Other Commodities Purchased By Tourists	**5,317.6**	**3,356.1**	**8,673.7**	**1,984,523.5**	**0.4**	**2,357.1**
Total Tourism Expenditures	**35,924.5**	**17,812.4**	**53,737.0**	**2,105,493.4**	**2.6**	**20,961.9**

Appendix F: GDP and Employment for Tourism and Non-Tourism Industries, Canada, 2000

Industry	Labour Income	Net Income of Unincorporated Business	Other (3)	GDP at Basic Prices	Number Of Jobs	Labour Compensation per Job	GDP per Job	Tourism's Share of Total Industry's GDP (2)
	millions of dollars				('000)	dollars	dollars	(%)
Tourism activities:								
Air transportation	2,949.4	..	730.7	3,680.1	58	50,700	63,200	77.9
Railway transportation	101.0	..	582.4	683.3	3	34,800	235,500	14.1
Water transportation	95.8	1.2	30.9	127.9	2	51,100	67,400	11.3
Bus transportation	275.1	4.0	140.1	419.1	10	28,600	43,000	30.5
Taxicabs	33.6	38.9	21.8	94.2	4	16,800	21,800	14.4
Vehicle rental	267.7	1.1	680.2	949.0	8	31,900	112,600	26.3
Total Transportation	**3,722.6**	**45.1**	**2,186.0**	**5,953.7**	**86**	**44,100**	**69,600**	**36.9**
Hotels	2,550.4	132.5	1,302.5	3,985.4	107	25,200	37,400	65.9
Motels	367.8	18.8	184.9	571.5	19	20,700	30,600	69.4
Camping	189.5	5.7	84.2	279.4	13	15,200	21,800	80.1
Other accommodation	285.4	6.4	118.3	410.1	21	13,900	19,500	53.7
Total Accommodation	**3,393.1**	**163.4**	**1,690.0**	**5,246.5**	**159**	**22,400**	**33,000**	**65.9**
Food and Beverage Services	**2,205.7**	**90.0**	**395.2**	**2,691.0**	**143**	**16,100**	**18,800**	**17.5**
Recreation and Entertainment	**1,246.7**	**93.1**	**436.7**	**1,776.4**	**61**	**22,000**	**29,100**	**22.4**
Travel Agencies	**1,257.1**	**11.3**	**421.0**	**1,689.4**	**42**	**30,400**	**40,500**	**91.4**
Total Tourism Industries	**11,825.2**	**402.9**	**5,128.8**	**17,357.0**	**491**	**25,000**	**35,400**	**35.4**
Other Industries	**3,304.2**	**162.4**	**1,583.8**	**5,050.3**	**119**	**29,200**	**42,500**	**..**
Total Tourism Activities	**15,129.4**	**565.3**	**6,712.6**	**22,407.3**	**610**	**25,800**	**36,800**	**..**
Non-Tourism Activities:								
Agriculture, forestry, fishing and hunting	7,176	2,298	12,554	22,028	446	21,300	49,500	
Mining and oil and gas extraction	10,108	167	50,613	60,888	166	61,900	366,400	
Utilities	6,162	7	20,073	26,242	95	64,900	276,100	
Construction	36,120	5,397	8,131	49,648	906	45,900	54,900	
Manufacturing	93,588	421	89,432	183,441	1,929	48,800	95,200	
Wholesale trade	34,717	929	15,195	50,841	817	43,700	62,300	
Retail trade	37,238	3,381	10,692	51,311	1,671	24,400	30,800	
Transportation and warehousing	23,418	2,158	11,759	37,335	630	40,700	59,300	
Information and cultural industries	16,820	177	15,129	32,126	371	45,900	86,800	
Finance, Insurance, Real Estate and Leasing	48,596	28,881	105,371	182,848	934	83,000	195,800	
Professional, Scientific And Technical Services	31,197	6,665	5,690	43,553	889	42,600	49,000	
Administrative And Support, Waste Management And Remediation Sevices	13,887	1,662	3,128	18,677	571	27,300	32,800	
Educational Services	1,221	721	107	2,050	91	21,300	22,500	
Health Care And Social Assistance	10,748	10,266	2,854	23,868	612	34,400	39,000	
Other industries[1]	159,078	2,493	31,098	192,669	4,444	36,400	43,400	
Total non-tourism activities	**530,075**	**65,622**	**381,827**	**977,523**	**14,570**	**40,900**	**67,100**	
Total Economy	**545,204**	**66,187**	**388,540**	**999,930**	**15,181**	**40,300**	**65,900**	
of which: Business sector	**413,479**	**66,187**	**364,601**	**844,266**	**12,337**	**38,900**	**68,500**	

1. *Including government and non-profit institutions.*
2. *Percentage of an industry's GDP that comes from satisfying tourism demand. "Total industry's GDP" is a broad variable as it also includes freight activities.*
3. *Includes other operating surplus, other taxes on production (excluding taxes on products) and other subsidies on production.*

Glossary

Domestic supply of tourism commodities is defined as the total production in Canada of the tourism commodities which are mainly produced by tourism industries. Not all of domestic supply is purchased by visitors, so that supply exceeds tourism demand for the CTSA. For example, visitors purchase only a small proportion of food and beverage services, with most going to local consumption. Also, supply does not include imports. For example the sale of a ticket on a non-Canadian airline is excluded from supply.

Labour income equals the sum of wages and salaries plus supplementary labour income.

Net income of unincorporated business is equal to earnings of unincorporated proprietors, except farm operators, from their own business. It includes the net income of unincorporated businesses and self-employed individuals, as well as the net rental income of persons.

Other operating surplus is equal to income from production other than labour or mixed income. It includes depreciation and profit.

Supplementary labour income is the employers' social contributions, either compulsory or voluntary. It includes retirement allowances and contributions to employment insurance, the Canada and Quebec Pension Plans, other pension plans, workers' compensation, medicare, dental plans, short- and long-term disability insurance, etc.

Tourism: The definition of tourism in the CTSA follows that adopted by the World Tourism Organization and the United Nations Statistical Commission: "the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes".

Tourism commodities are ones for which a signicant part of their total demand comes from visitors. Examples include travel agency services and rail transportation services.

Tourism demand is defined as the spending of Canadian and non-resident visitors on domestically produced commodities. It is the sum of tourism domestic demand and tourism exports.

Tourism domestic demand is the spending in Canada by Canadian visitors on domestically produced commodities.

Tourism employment is a measure of employment in tourism and non-tourism industries. Tourism employment measures the number of jobs in an industry generated by, or attributable to, tourism spending on the goods and/ or services produced by that industry. It is based on an estimate of jobs rather than "hours of work". Thus, someone who works 10 hours a week counts for as much, by this measure, as someone who works 50 hours a week.

Tourism exports include spending by foreign visitors on Canadian-produced tourism goods and services. It can contain spending that may take place outside of Canada, for instance, the purchase of an airline ticket from a Canadian international carrier, to travel to Canada.

Tourism Gross Domestic Product is the unduplicated value of production, within the boundaries of a region, of goods and services purchased by tourists. In the CTSA, GDP is calculated at basic prices in both current and constant dollars. Only direct GDP is calculated in the CTSA. GDP is also generated indirectly in the upstream production chain of a good or service. Although these indirect effects can be linked to tourism, they are not included in GDP.

Tourism industries would cease to exist or would continue to exist only at signicantly reduced levels of activity in the absence of tourism. Examples of tourism industries include air transportation and accommodation.

Visitors are persons who undertake tourism as defined above. They are referred to as either tourists (those who stay overnight or longer in the place visited), or same-day visitors.

Wages and salaries equal the total remuneration, in cash or in kind, paid to employees in return for work done. It is recorded on a gross basis, before any deduction for income taxes, pensions, unemployment insurance and other social insurance schemes. It also includes other forms of compensation, namely commissions, tips, bonuses, directors' fees and allowances such as those for holidays and sick leave, as well as military pay and allowances. It excludes employers' social contributions, which are treated as supplementary labour income.

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