Measuring the Size of British Columbia’s Tourism Sector

The BC Stats Methodology

About BC Stats’ tourism statistics program

BC Stats first began producing estimates of tourism gross domestic product (GDP) in 1992. During the nearly twenty years since then, the tourism statistics program has expanded to include a number of other variables. This document outlines the general approach taken in the measurement of tourism GDP, employment, wages, revenue, tax revenues and establishment counts for British Columbia.

The industry classification system

Most of the economic data published by Statistics Canada (and other statistics agencies) measures the value of the inputs used, or outputs made, by producers of goods and services. The data is usually categorized by industry. Individual establishments are classified to an industry based on the activity from which they derive most of their revenue. If an establishment is engaged in more than one line of business (e.g., a hotel that operates a restaurant but does not report on restaurant operations separately from the hotel operations) all of its activities are allocated to a single industry (in this case, the accommodation services industry).

The industry classification system is based on the product that is being produced (e.g., accommodation services) rather than who is consuming the product (e.g., a tourist, or a local resident, business or government agency). Since tourism is an activity engaged in by individuals, it does not correspond to any standard industry grouping. Instead, it includes a portion of the activities of a broad range of industries that provide goods and services to tourists. This means that it is not possible to measure the size of the tourism sector directly from the published data.

The BC Stats method: An industry-based approach

The BC Stats approach to tourism estimation is based on supply-side indicators that are adjusted to exclude non-tourism-related activities. Adjustment factors – i.e., tourism proportions – are derived from time-series data for industries included in the tourism sector. These adjustment factors attribute a percentage of the activities of industries that produce services used by tourists to the tourism sector. This approach relies on information from standard data available on an annual basis from Statistics Canada.

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1 The methodology was described in a paper by Carl Cavanagh and Ruth McDougall entitled “British Columbia’s Tourism GDP, 1981-1991: Methodology”.

Since then changes have been made to the industry classification system used by Statistics Canada, and the range and quality of service sector indicators available for use has been significantly improved. The BC Stats methodology has evolved over time to take these changes into account.

2 An establishment is a homogeneous unit of production which maintains its own financial records.

3 BC Stats uses the term “sector” to describe a group of industries that have some similar characteristics. The tourism sector is defined to include all industries that provide services directly to tourists.

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Tourism Satellite Accounting: An alternative way of measuring the size of the tourism sector

Another approach to the measurement of tourism activities is from the point of view of products consumed by tourists—i.e., a commodity-based approach. This approach relies on information from input-output tables, which describe in detail the goods and services consumed by individuals, businesses and government as either inputs into production or as final demand (consumer, business, government and non-resident purchases of goods and services). The Canadian input-output tables include data for 727 different goods and services, 303 industries, and 170 different final-demand categories. Input-output (IO) tables are produced annually by Statistics Canada for each province and territory.

Tourism Satellite Accounts (TSA)\(^4\), which are derived from input-output tables, comprise a set of statistical tables that describe the characteristics of the tourism sector at a given point in time. They include estimates of visitor expenditures on tourism-specific products—i.e., goods and services which, in the absence of tourism, would probably cease to exist in meaningful quantities or for which the level of consumption would be significantly reduced. Tourism Satellite Accounts encompass a number of tables showing visitor final consumption expenditure by product and type of tourism (same-day and overnight visitors, domestic and international tourists), production accounts (outputs of tourism-specific and other products) of tourism industries, the domestic supply and consumption of tourism products, tourism employment, investment, and other tourism indicators.

The commodity-based (satellite accounting) approach has been adopted by a number of statistical agencies.

Pros, cons and similarities...

BC Stats’ industry-based approach to the derivation of tourism indicators makes use of standard annual time series data. The main advantages to this approach are that the information produced is very timely and it is consistent with similar data for “standard” industries. The disadvantage is that there are no benchmark figures against which tourism sector estimates for the province can be compared; at this point in time, the data is only available for BC.

The TSA approach also relies on standard industry data, and uses consumption shares to determine tourism proportions. The main advantage of the TSA approach is that the same basic approach is used to derive tourism estimates for all regions, so information can be compared across jurisdictions. However, because it is based on input-output tables, timeliness of the data is a major drawback. Preliminary provincial input-output tables for the 2005 calendar year were first published in November 2008\(^5\). By comparison, preliminary 2008 GDP figures for the province, used in the BC Stats methodology, will be released in April 2009.

The goal of the TSA is to provide as much information as possible about the characteristics of tourism demand and supply; in this context, the time series aspect is not critical. In fact, even at the national level, the TSA is only produced on an occasional basis.


\(^5\) Since the TSA relies on information from input-output tables and can only be calculated after these tables have been finalized, the Statistics Canada estimates are produced with an even greater lag. National TSA estimates are produced only occasionally: estimates for 2002 were released in the fall of 2007; the previous data release in 2005 included estimates for the 2000 calendar year. Provincial-level data have only been published twice: for 1996 (in 2002) and for the 1998 calendar year (in 2003).
The BC Stats estimates have been developed to show trends over time in the tourism sector. While the BC Stats methodology does not fall exactly within the standard framework for satellite accounts, the definition of tourism and tourism-related activities used in the BC Stats method is similar to that recommended for tourism satellite accounting. The data set used to construct the BC Stats estimates relies on input-output tables, but also makes use of more up-to-date information (which is ultimately used to build the input-output tables). As such, the BC Stats methodology has the advantage of allowing for the construction of time series data which can be used to assess changes and trends in the tourism sector, while remaining true to the generally accepted view of what constitutes tourism, and what should be included in tourism sector measures.

The BC Stats method: a four-step process

The basic approach taken to measuring the size of the province’s tourism sector involves a four-step process:

1. Determining which types of travellers should be regarded as tourists.
2. Determining which industries should be considered tourism-related.
3. Determining the percentage of each industry’s activities that should be attributed to the tourism sector.
4. Developing tourism sector indicators based on these definitions.

These steps are described in more detail in the following sections.

Caveats

All of the tourism sector indicators published by BC Stats are derived by applying a tourism proportion to data for an industry that provides goods and services used by tourists. Estimates of tourism GDP, revenue, tax revenue, employment and wages are therefore highly dependent on the tourism proportions used to generate these estimates. In some cases, these proportions are based on quite specific information about industry characteristics and the extent to which industries rely on tourism-related business. In other cases, the information on which the proportions are based is not as reliable. While every effort is made to ensure that the proportions are reasonable, and that they are based on the best available information, this is probably the weakest aspect of the tourism statistics methodology. BC Stats continues to work on validating, and where necessary, improving the tourism ratios used in the calculation of tourism indicators.

How sensitive are the tourism estimates to the tourism proportions used?

Not surprisingly, the industries within the tourism sector that account for the largest share (nearly two thirds) of total tourism activity are the accommodation & food services and transportation & storage industries. For both industry groups, the tourism proportions have recently been reviewed. The BC Stats estimates were compared to those used by other agencies, and adjusted where appropriate. In the case of transportation & storage, it is unlikely that the proportions for these industries are significantly over- or under-stating the importance of tourism in the industry, although further research may well be warranted.

Virtually all of the tourism proportions used by BC Stats are based on information provided by industry associations, or gleaned from other sources. While determining these proportions is far from an exact science, it is unlikely that the proportions used by BC Stats are significantly biased up or down. Tourism proportions that are based on less reliable information are largely those in the smaller industries, where adjustments to the proportions are unlikely to result in significant changes.

To test the sensitivity of the estimates to these proportions, the percentages used in the food services industry, one of the largest in the sector, were adjusted up by 30%. This resulted
in a roughly 2% increase in estimated tourism sector GDP. A similarly large upward revision in the tourism proportions for arts, entertainment & recreation services resulted in a 1 to 1.5% increase in estimated GDP.

What is a tourist?

Many people would define a tourist as a vacationer or leisure traveller. However, the definition adopted by statistical organizations is somewhat broader. According to the World Tourism Organization, a tourist is:

Someone who travels to and stays in a place outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated within the place visited.

In practical terms, the phrase “usual environment” has been defined as the area including within about 80 kilometres of a person’s home and place of work or study and other places frequently visited.

This definition of tourism includes the activities of visitors who are temporarily away from their permanent residence for a number of different reasons. They may be:

- Leisure travellers;
- Visiting family and friends;
- Visiting a vacation home (provided it is not their usual place of residence, but is visited for the purposes of recreation);
- Travelling to obtain health care;
- Travelling on business; or
- Temporarily away from home for other reasons.

It should be noted that individuals who are temporarily living and being paid for work done at a location other than their usual environment (e.g., forestry or oil industry workers) are not included in this definition.

British Columbians travelling for business or pleasure would be viewed as tourists, as long as they travel at least 80 kilometres away from their usual place of residence. It is important to keep this definition in mind when using data describing the size of the province’s tourism sector.

Which industries make up the tourism sector?

Industries included in the tourism sector are those that provide services used by tourists. Tourists need not account for the bulk of their activities; they need only account for a measurable portion of the industry’s business, which can be attributed to the tourism sector.

British Columbia’s economy includes both goods-producing6 and service-producing7 industries. While all industries in the province were considered for inclusion in the tourism sector, it is assumed that goods-producing industries do not deal directly with tourists8. While tourists may purchase or consume fish, wine and other agricultural products, these purchases are normally made from retail vendors, restaurants or other industries. In the service sector, industries that were deemed to have a tourism component are listed in Table 1.

A broad range of published data is available for most of the industries in this group, including measures of gross domestic product, total revenue, wages and salaries, employment, and establishment counts.

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6 Agriculture; fishing; forestry; mining; manufacturing; construction and utilities
7 Retail trade; wholesale trade; transportation & warehousing; information & cultural industries; finance & insurance; real estate & rental & leasing; professional, scientific & technical services; management of companies & enterprises; administration, support, waste management & remediation; educational services; health care & social assistance; arts, entertainment & recreation; accommodation & food services; other services; and public administration
8 It may be appropriate to reconsider this assumption, given the growing popularity of agri-tourism activities such as wine and farm tours. However, since these activities may be difficult to disentangle from other activities in the relevant industries, it may not be practical to do this.
It is recognized that almost all of the industries listed in Table 1 provide services to residents as well as tourists. In some cases, tourism-related activities account for only a small percentage of total industry output. For all industries, only those activities that are considered to be tourism-related are included in the tourism estimates.

Table 1: Industries that provide services to tourists

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Industry:</th>
<th>Tourist-related activities:</th>
</tr>
</thead>
<tbody>
<tr>
<td>44-45</td>
<td>Retail trade</td>
<td>Purchases of recreational vehicles, groceries, souvenirs, clothing etc</td>
</tr>
<tr>
<td>48-49</td>
<td>Transportation &amp; warehousing</td>
<td>Air, water, rail, bus, taxi and other transportation services</td>
</tr>
<tr>
<td>51</td>
<td>Information &amp; cultural industries</td>
<td>Visits to movie theatres, telecommunication services purchased by tourists</td>
</tr>
<tr>
<td>52, 53</td>
<td>Finance, insurance, real estate &amp; rental &amp; leasing</td>
<td>Purchase of cabins and other vacation homes, special insurance coverage for travellers</td>
</tr>
<tr>
<td>561</td>
<td>Administrative &amp; support services</td>
<td>Services of travel agents and tour operators</td>
</tr>
<tr>
<td>71</td>
<td>Arts, entertainment &amp; recreation</td>
<td>Performing arts, skiing, golf clubs, other recreational services</td>
</tr>
<tr>
<td>72</td>
<td>Accommodation &amp; food services</td>
<td>Accommodation services, restaurants and drinking places</td>
</tr>
<tr>
<td>81</td>
<td>Other services</td>
<td>Tourism associations, motor vehicle repairs, personal services</td>
</tr>
<tr>
<td>61, 62, 91</td>
<td>Public administration</td>
<td>Government activities in support of tourism</td>
</tr>
</tbody>
</table>

Classification of industries

The industry classification system used in North America (Canada, the US and Mexico) is called the North American Industrial Classification System (NAICS). Industry data published by Statistics Canada is categorized using this classification system.

Tourism proportions: what percentage of each industry’s activities should be attributed to the tourism sector?

In most service industries, doing business involves some sort of personal interaction with clients. For example, recreation, accommodation, food & beverage, and personal services can only be provided to, and used by, individuals. Some service industries also engage in activities that do not involve direct contact with individuals. For example, the air, water, bus and rail industries transport freight as well as passengers. For these industries, it is necessary to determine the passenger-related share of total activities before applying a tourism proportion. The use of tourism proportions assumes that there is a symmetrical relationship between consumption and output, so that if tourists account for a given percentage of an industry’s clientele, they account for a similar percentage of the industry’s output.

Since industries provide services used by local residents as well as tourists, it is necessary to determine the percentage of their activities that are tourist-related. The tourism proportions used by BC Stats were originally developed in the early 1990s, when more than 100 trade groups and associations were surveyed. In the interviews, industry representatives were told the nature of the project and apprised of the definition of tourism. They were then asked to use their experience and knowledge of the market to estimate the proportion of their industry’s clientele that could be reasonably described as “tourist”. In most instances these proportions were estimated for the BC market, but occasionally the consultation process...
yielded an estimate for all of Canada, which was then applied to BC.

The tourism proportions used by BC Stats have been periodically reviewed and updated, most recently in the summer of 2007. At that time, tourism research done by other organizations, including Statistics Canada, was reviewed, and the proportions used in these studies were compared with the BC Stats estimates. Information from tourism surveys (e.g., the Canadian Travel Survey) was also analyzed to see if it was possible to make any inferences about tourism activities in BC based on the survey data. Finally, various industry representatives were contacted to obtain their feedback on the proportions being used in the BC tourism indicators. As a result of these efforts, some of the tourism proportions used by BC Stats were modified to bring them more in line with the views of other researchers as well as operators in the tourism sector.

**Data sources and methodology used to derive estimates for key indicators in all tourism industries**

Tourism proportions are applied to industry data to derive estimates of tourism-related GDP, employment and other variables. The grand total of tourism-related activities for all tourism-related industries is the overall estimate for the province’s tourism sector.

**Data revisions**

The data from which the tourism sector estimates are compiled comes from many different surveys as well as administrative data. Almost all of the information is published by Statistics Canada, and is subject to annual revision as more information comes available, or changes to estimation methodologies used by Statistics Canada are introduced. As well, periodic reviews of the tourism proportions or methodologies used by BC Stats may also result in some revision to the data.

The estimates should therefore be viewed as preliminary, and users of the data should be aware that information for the last four years in particular may be subject to change as data sources used to construct the estimates are frequently revised. These changes are usually most significant for the last year or two of published data.

**Gross domestic product (GDP)**

Annual data on provincial GDP by industry is supplied to BC Stats by Statistics Canada. This information is available in summary form on CANSIM, Statistics Canada’s electronic database. More detailed (unpublished) estimates are used by BC Stats to calculate GDP for the tourism sector. The information includes both current and chained (i.e., adjusted to remove the effects of price changes over time) data.

Tourism GDP estimates are calculated by multiplying GDP data for each included industry by the appropriate tourism proportion.

**Employment**

Data from the *Survey of Employment, Payrolls and Hours* (SEPH) is published by Statistics Canada each month. This information is used to derive the employment and wage estimates for the tourism sector.

The SEPH data is derived from administrative data on payroll deductions obtained from the Canada Revenue Agency, supplemented by information from Statistics Canada’s monthly data.

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10 The information supplied to BC Stats includes data that is not releasable under the Statistics Act. BC Stats has a data-sharing agreement with Statistics Canada, and is covered by legislation which protects the confidentiality of industry data, so the agency has access to information that has been deemed confidential and cannot be publicly released. This information is used to compile the estimates for the tourism sector, and while the overall total for the sector is releasable, some of the underlying details are not.

11 Published in CANSIM tables 379-0025 and 379-0027.

12 Because of the nature of these industries, agriculture, fishing and trapping, private household services and military personnel of defence services are not included in the SEPH data.
**Business Payroll Survey.** The administrative data is a census of all businesses with payroll deduction accounts, while the business payroll survey is a stratified random sample.

Self-employed workers do not have payroll deduction accounts, so they are not included in the SEPH data. For industries where self-employment is significant, the estimates based on SEPH data will understate total employment.

An alternative source of employment and wage information is the **Labour Force Survey (LFS)**, a monthly sample survey of households which includes both employees and self-employed workers, and covers all industries in the province. LFS employment data is published by detailed industry, and there is also some information on wage rates by industry.

Because of the differences in coverage between the SEPH and LFS data, there are sometimes discrepancies between the two data sets. These are generally most noticeable at the detailed industry level. In general, the LFS data is viewed as being a more reliable indicator of total employment, because it includes all industries, and all types of employment. LFS data are used to determine the size of the labour force, and to calculate unemployment rates.

Within the **System of National Accounts**\(^{13}\), the LFS coding by industry is viewed as being somewhat less reliable than the coding of the SEPH data. LFS data is based on responses made by the member of the surveyed household being interviewed, so the accuracy of the industry breakdown in the LFS depends on how much information the interviewee is able to provide about the specific characteristics of the employer of each household member who is in the labour force. In contrast, the SEPH data comes from administrative sources, and is linked into Statistics Canada’s **Business Register**, a database of establishments which have already been coded to a particular industry. This means that it is possible to verify the industry category associated with each of the employer businesses included in the SEPH data.

Both the SEPH and the LFS data have weaknesses. In the case of SEPH, it does not include the self-employed, and self-employment is likely a significant factor in some tourism-related industries. On the other hand, the industry coding in the LFS is weaker, so using the LFS data would also be problematic. The SEPH data continue to form the basis of the tourism employment and wage estimates published by BC Stats, but further research into the possibility of making more use of the LFS data may be warranted.

Tourism employment estimates are calculated by multiplying industry employment data by the appropriate tourism proportion.

**Wages**

Estimates of wages in the tourism sector are calculated by multiplying tourism employment in each industry by the average annual wage (for hourly paid employees, including overtime) in the industry. The initial estimates (based on the SEPH data) are then benchmarked to ensure that the total wages in each industry (including tourism and non-tourism-related activities) is consistent with the wage and salary data in the economic accounts.

**Revenue**

BC Stats’ estimates of revenue for the tourism sector are based on information from a variety of different annual and monthly surveys. The specific data and methodology used to derive revenue estimates for each industry in the
Tourism sector is described in more detail in the remainder of this paper.

Tourism revenue estimates are calculated by multiplying tourism revenue data for each included industry by the appropriate tourism proportion.

**Tourism Tax Revenues**

Tax revenue estimates for the tourism sector were calculated using information about the tax coverage, specific taxes, and revenue estimates by industry. These are also described in more detail in the remainder of this paper.

Tourism tax revenue estimates are calculated by multiplying tourism revenue data by applicable tax rates (PST, GST, and special taxes on liquor and gas). As well, some taxes such as the air transportation tax are included in the numbers.

**Establishments**

Establishment counts for the province’s tourism sector are derived from Statistics Canada’s *Business Register*, a listing of all business establishments in the province. The *Business Register* is the sampling frame used by Statistics Canada for virtually all of its surveys.

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>481</td>
<td>Air transportation</td>
</tr>
<tr>
<td>482</td>
<td>Rail transportation</td>
</tr>
<tr>
<td>483</td>
<td>Water transportation</td>
</tr>
<tr>
<td>485</td>
<td>Transit &amp; ground passenger transportation</td>
</tr>
<tr>
<td>487</td>
<td>Scenic &amp; sightseeing transportation</td>
</tr>
<tr>
<td>4881</td>
<td>Support activities for air transportation</td>
</tr>
<tr>
<td>4882</td>
<td>Support activities for rail transportation</td>
</tr>
<tr>
<td>4884</td>
<td>Support activities for road transportation</td>
</tr>
<tr>
<td>512130</td>
<td>Motion picture &amp; video exhibition</td>
</tr>
<tr>
<td>532111</td>
<td>Passenger car rental</td>
</tr>
<tr>
<td>532120</td>
<td>Truck, utility trailer &amp; RV rental &amp; leasing</td>
</tr>
<tr>
<td>5615</td>
<td>Travel arrangement &amp; reservation services</td>
</tr>
<tr>
<td>711</td>
<td>Performing arts, spectator sports &amp; related</td>
</tr>
<tr>
<td>712</td>
<td>Heritage institutions</td>
</tr>
<tr>
<td>713</td>
<td>Amusement, gambling &amp; recreation</td>
</tr>
<tr>
<td>721</td>
<td>Accommodation</td>
</tr>
<tr>
<td>722</td>
<td>Food services &amp; drinking places</td>
</tr>
</tbody>
</table>

The establishment counts provide an indication of how many businesses in the province are likely to be directly providing services to visitors, whether or not tourism is a significant portion of their business.

In contrast to other tourism-related data, the establishment counts include all businesses in each industry. The reason for this is that it is not possible to link financial data to establishment counts. A large hotel and a small B&B both count as one establishment, even though the revenues, GDP and employment associated with the former are likely many times larger than those of the latter. Any attempt to assign tourism proportions to establishment counts would be meaningless. Because of this, only those industries where a significant percentage of total establishments expected to provide services directly to tourists are included in the definition. For example, the establishment counts do not include tourism-related retailing. Although all of rail transportation was included in the original definition adopted by BC Stats, this should probably be reviewed since most rail transportation activities are not tourist related. For this industry, as well as water transportation, it would be possible to extract passenger services from the total, and this would be an area for improvement in the future.

The remaining sections of this document provide specifics about how tourism data for each of the industries within the tourism sector is calculated.

**Retail Trade**

The retail industry includes retailers of motor vehicles & parts, RVs, furniture, home furnishings, appliances, electronics, building materials, garden equipment, food & beverages, health & personal care supplies, gas, clothing, shoes, sporting goods, hobby supplies, books, music, flowers, and many other items. Retail establishments range in size from small “mom
& pop” operations to large department stores or car lots.

What’s included in tourism-related retail trade?

For many retailers, tourists are not part of their usual clientele (e.g., new car dealers\textsuperscript{14} or furniture stores). Other retailers (e.g., souvenir stores) rely a great deal on business from visitors.

The retail industries that are considered to have a significant tourism component are listed in Table 3, together with the estimated tourism share for each industry.

### Table 3: Retailers that sell directly to tourists

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
<th>Tourism share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4412</td>
<td>Recreational vehicle dealers</td>
<td>63.0</td>
</tr>
<tr>
<td>4413</td>
<td>Automotive parts &amp; accessories stores</td>
<td>2.0</td>
</tr>
<tr>
<td>4422</td>
<td>Home furnishing stores</td>
<td>2.0</td>
</tr>
<tr>
<td>44313</td>
<td>Camera &amp; photographic supply stores</td>
<td>5.0</td>
</tr>
<tr>
<td>4451</td>
<td>Grocery stores</td>
<td>7.5</td>
</tr>
<tr>
<td>4452</td>
<td>Specialty food stores</td>
<td>7.5</td>
</tr>
<tr>
<td>4453</td>
<td>Beer, wine &amp; liquor stores</td>
<td>5.0</td>
</tr>
<tr>
<td>446</td>
<td>Health &amp; personal care stores</td>
<td>7.5</td>
</tr>
<tr>
<td>447</td>
<td>Gasoline stations</td>
<td>15.0</td>
</tr>
<tr>
<td>4481</td>
<td>Clothing stores</td>
<td>7.0</td>
</tr>
<tr>
<td>4482</td>
<td>Shoe stores</td>
<td>7.0</td>
</tr>
<tr>
<td>4483</td>
<td>Jewellery, luggage &amp; leather goods stores</td>
<td>12.0</td>
</tr>
<tr>
<td>4511</td>
<td>Sport, hobby &amp; musical instrument stores</td>
<td>4.0</td>
</tr>
<tr>
<td>4512</td>
<td>Book, periodical &amp; music stores</td>
<td>10.0</td>
</tr>
<tr>
<td>452</td>
<td>General merchandise stores</td>
<td>10.0</td>
</tr>
<tr>
<td>4532*</td>
<td>Souvenir stores</td>
<td>100.0</td>
</tr>
<tr>
<td>4533</td>
<td>Used merchandise stores</td>
<td>5.0</td>
</tr>
<tr>
<td>45392</td>
<td>Art galleries</td>
<td>6.0</td>
</tr>
</tbody>
</table>

* Souvenir stores are part of 45322 (gift, novelty & souvenir stores)

Data sources specific to retail trade estimates

Statistics Canada’s Annual Retail Store Survey\textsuperscript{15} measures the operating and financial characteristics (including revenues and expenses) of retailers in the province. Published data at the provincial level is only available for 21 “trade groups” (only some of which correspond exactly to the categories in Table 2). More detailed (and unsuppressed) information is provided to BC Stats through a data-sharing agreement with Statistics Canada.

The survey data is available with a two-year lag (data for 2006 was published in 2008), so it is extrapolated using data from Statistics Canada’s monthly survey of retail sales. The monthly survey data is reported for the 21 standard trade groups, so in some cases the detailed survey data is extrapolated using aggregates:

Monthly sales data for used & recreational motor vehicle & parts dealers is used to extrapolate the annual survey data for:
- RV dealers
- Auto parts & accessories stores

Monthly sales data for shoe, clothing accessories & jewellery stores is used to extrapolate the annual survey data for:
- Shoe stores
- Jewellery, luggage & leather goods stores

Monthly data for sporting goods, hobby, music & book stores is used to extrapolate the annual survey data for:
- Sport, hobby & musical instrument stores
- Book, periodical & music stores

Monthly data for miscellaneous store retailers is used to extrapolate the annual survey data for:
- Gift, novelty & souvenir stores
- Used merchandise stores
- Art galleries

Tourism Proportions

When surveyed in 1992, the Retail Council of Canada estimated that overall, tourists account for approximately 5% of all retail trade in Canada. This estimate was used as a catch-all for several types of retailers. Eaton’s estimated that 10% of its customers were tourists, and this proportion was used for all general merchandise stores. Tourism proportions were

\textsuperscript{14} Although new and used car dealers are not part of the tourism sector, retailers of recreational vehicles, which are primarily used for tourism-related activities, are included.
\textsuperscript{15} Published in CANSIM table 080-0011
also provided by the Canadian Federation of Independent Grocers (food stores); the Pharmacists Association of BC (drug stores); Petro-Canada (gas stations and garages); Canadian Association of Professional Art Dealers (art galleries); Fraserway RV Centre and Otto Mobiles Vancouver Ltd (RV dealers), Polaris of Canada and Brooks Industries (snowmobiles and motorcycles); BC Marine Trade Association (boat and accessories dealers); Bagatelle Ltd (luggage); BC Jewellers Association (jewellery); and the BC Liquor Distribution Branch (alcoholic beverages).

In 2007, when the proportions were reviewed, various attempts were made at contacting both large and small retailers. Most businesses were unwilling to offer any information. The BC Retail Council had not performed any studies regarding tourism, but felt that the ratio of 10% for clothing stores was too high. A review of tourism proportions used by other agencies also suggested that some of the initial estimates may have been too high. For example, the ratio for food stores (12.5%) was nearly four times the national proportion estimated by Statistics Canada (3.4%). The ratios for food, health & personal care, clothing and shoe stores were all reduced as a result of this review.

How are the retail trade estimates calculated?

**GDP**

Statistics Canada does not publish detailed estimates of GDP for sub-industries within retail trade industry; the information is only available for the industry as a whole.

Revenue and expenditure data from the *Annual Retail Store Survey* are used to derive estimates of operating margins by kind of business at the four-digit level. The published GDP estimate for retail trade is then distributed across retail industries based on these operating margins. Conceptually, the operating margin is similar to GDP, so this distribution should be reasonably accurate.

Consumer price indices are used to estimate constant dollar (i.e., excluding the effects of inflation) operating margins, which are then used to distribute the constant dollar GDP figure across retail industries.

The tourism-related GDP component for retail trade is calculated by applying the relevant tourism proportions to GDP estimates for each tourism-related retail industry.

**Revenue**

Revenue estimates for each tourism-related retail industry are derived directly from the annual and monthly surveys. The tourism proportion for each industry is applied to the revenue data to determine tourism revenues by retail industry.

Although the GDP, employment, wage and establishment data include all tourist-related retail spending, the revenue estimates do not include spending on durable goods such as recreational vehicles, auto parts, cameras and household furnishings.

**Employment and Wages**

Employment and wage estimates for the retail industries are based on SEPH data by industry (4-digit NAICS), adjusted by the applicable tourism proportion.

Wage estimates are derived by multiplying total employment in the industry by the average weekly earnings (including overtime) of hourly-paid workers in the industry. The data is then annualized.

For most tourism-related retail industries, the SEPH data is available at the required level of detail, so no estimation is required. However, employment and wages for camera & photo supply stores, sporting goods stores, and gift and souvenir stores are estimates based on shares of 4-digit SEPH employment data.

**Establishment Counts**
Retail activities are not included in the tourism establishment counts because a significant percentage of total establishments in retail do not provide services directly to tourists.

Tourism Tax Revenues

Tourism tax revenue estimates for retail trade are derived by applying the appropriate tax rates to tourism revenue estimates by type of retailer.

Not all commodities sold in retail stores are taxable. For instance, there is no PST on food, and most food products are also GST-exempt. On the other hand, liquor sales are subject to higher PST rates, and the cost of alcohol includes embedded excise taxes and duties. Food stores and pharmacies sell a combination of taxable and untaxed products. Gasoline is subject to additional taxes. Therefore, business-specific tax rates are applied to the revenue estimates for of the various retail businesses.

The Retail Commodity Survey\(^{16}\) collects information about commodity sales by type of retailer. In recent years, the information available in the published survey results has been changing. Originally, the data was available at both the provincial and national levels, but this is no longer the case. Only national-level data is being reported.

BC Stats has been using previously published information on sales by commodity and type of business to determine the percentage of sales at food stores, pharmacies and general merchandise stores that is subject to tax. Statistics Canada has recently begun to publish more detailed information that will be used to update and modify these shares the next time the tax revenue estimates are produced.

In the case of food stores, the applicable tax rate is derived using information from the Retail Commodity Survey, together with data from the economic accounts to ascertain the approximate share of total sales in a typical food store that would be subject to taxable goods.

The effective PST/GST rate for grocery stores is roughly 3%, but varies slightly from year to year, as there have been changes in the PST and GST rates over time.

For liquor, wine and beer stores, the combined PST/GST rate is 15%. A share of liquor store profits is also attributed to tourist purchases of wine, beer and spirits.

Health and personal care stores sell a combination of taxable and non-taxable products. According to some reports, pharmaceuticals account for anywhere from 40% to 60% of total sales at large chains such as Walgreens in the United States or Shoppers Drug Mart in Canada.

Based on information from the Retail Commodity Survey, a slightly higher share of total pharmacy sales appears to be taxable. The total tax rate for sales by these retailers was estimated at about 10% in 2008, but this rate may be adjusted when the new information from the Retail Commodity Survey is introduced into the calculation.

For gas stations, an implicit tax rate for motor fuel is calculated using information on federal and provincial excise tax rates, PST and GST rates and a weighted average of fuel prices in Vancouver and Victoria. The fuel price data is obtained from CANSIM, while federal and provincial government sources provided information on historical excise tax rates. Although about half the BC population resides in Vancouver and surrounding areas, the Vancouver prices were given a higher weight (75%) since they may be more representative of actual prices paid on the Mainland than are prices in the Victoria area (weighted at 25%).

Gas stations sell more than just gas; many also include a convenience store that sells food items, and may also provide vehicle repair

\(^{16}\) Published in CANSIM tables 080-0018 and 080-0019
services. It is assumed that fuel sales make up about 85% of total sales at gas stations, while food and repair services account for 15% of the total. Therefore, the implicit tax rate is a weighted average of the PST/GST total (currently 12%) and the implicit tax rate for motor fuel.

It should be noted that some of the weights used in this calculation are arbitrary; further research may suggest that they should be revised.

For book stores, there is no PST on books, but some taxable items are sold by book retailers. It is assumed that 10% of bookstore sales are subject to PST, while the GST is applied to the total value of sales.

Like food retailers, general merchandise retailers sell a variety of products, not all of which are subject to taxes. The taxable portion of sales is estimated based on information from the Retail Commodity Survey.

For all other retailers, the tax rate used is the combined PST/GST rate (12% in 2008).

**Transportation & warehousing**

The transportation & warehousing industry includes establishments engaged in providing air, rail, water, truck, transit & ground passenger, pipeline and scenic & sightseeing transportation, together with related support activities such as the operation of airports or deep sea ports. The industry group also includes postal and courier & messenger services as well as warehousing & storage.

**What’s included in tourism-related transportation & warehousing?**

Transportation services play a key role in the tourism sector. Visitors may travel to their destinations by air, water, rail, bus or private vehicles. They use taxi, bus and other transportation services when they arrive. Some transportation industries derive a considerable share of their total earnings from providing these services to travellers. Tourism-related activities are particularly important in the airline industry, but also play a significant role in land and sea-based transportation.

Many of the services provided by the transportation sector are related to the movement of freight, since the province is an important point of entry and exit for goods travelling to and from the country. This is particularly true for water, rail and trucking activities, as well as port and harbour operations. For example, BC Ferries provides an important means of transporting passengers to and from coastal communities, including the province’s two largest urban centres. At the same time, water transportation and associated services include the activities of BC-based shipping activity (e.g., tugboats, piloting and other services) related to the movement of cargo to and from the province’s major ports. Port operations facilitate the movement of passengers arriving in or leaving from BC, but are primarily involved in the handling of cargo entering or leaving the province.

Vancouver, Victoria, Prince Rupert and other ports are visited by cruise ships travelling up and down the coast en route to or from Alaska during the summer months. Although the operation of the cruise ships is external to the BC economy (since the organizations operating these ships are not based in the province), ports that provide services to the ships, and businesses onshore, benefit from visits by cruise ship passengers.

Activities related to the movement of freight rather than passengers are excluded from the tourism estimates. Only the passenger-related component of the activities of industries listed in table 4 is considered part of the tourism sector.

**Table 4: Tourism-related transportation services**
<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
<th>Tourism share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>481*</td>
<td>Air transportation (passengers only)</td>
<td>95.0</td>
</tr>
<tr>
<td>482114</td>
<td>Passenger rail transportation</td>
<td>92.0</td>
</tr>
<tr>
<td>483*</td>
<td>Water transportation (passengers only)</td>
<td>92.0</td>
</tr>
<tr>
<td>4851</td>
<td>Urban transit systems (includes bus and light rail services)</td>
<td>3.5</td>
</tr>
<tr>
<td>4852*</td>
<td>Interurban &amp; rural bus transportation</td>
<td>83.0</td>
</tr>
<tr>
<td>4853</td>
<td>Taxi &amp; limousine services</td>
<td>26.0</td>
</tr>
<tr>
<td>4855</td>
<td>Charter bus industry</td>
<td>95.0</td>
</tr>
<tr>
<td>4859</td>
<td>Other transit &amp; ground passenger transportation (e.g., shuttle services)</td>
<td>95.0</td>
</tr>
<tr>
<td>487</td>
<td>Scenic &amp; sightseeing transportation</td>
<td>100.0</td>
</tr>
<tr>
<td>488*</td>
<td>Support activities for passenger portion of air, rail, water &amp; road transportation (includes operation of airports, harbours and ports)</td>
<td>95.0</td>
</tr>
<tr>
<td>491</td>
<td>Postal services</td>
<td>5.0</td>
</tr>
</tbody>
</table>

*The industry definition for NAICS code includes both passenger and freight transportation.

The tourism proportion for air transportation was originally based on information supplied by Air BC, which has since been absorbed into Air Canada. In 1992 Air BC estimated that 0.5% of its passengers were regular commuters, so the tourism proportion was originally set at 99.5%. However, when the proportions were reviewed in 2007, it was noted that Statistics Canada uses a proportion of 95% in the TSA. This is consistent with the ratios suggested in other studies, so the tourism proportion for air transportation in BC was reduced to 95%.

**Rail transportation**

The *Railway Transport Survey* collects financial, operating, traffic, fuel consumption and employment data from all railways operating in Canada. The survey report does not provide a great deal of provincial-level detail, but statistics on revenues from passenger and freight transportation are available at the national level. The report also includes provincial level information on the amount of diesel fuel consumed transporting passengers and freight.

The passenger component of rail transportation in the province is estimated based on the national share of passenger-related rail revenues, adjusted by BC’s share of total diesel fuel consumption for passenger rail transport.

The tourism proportion of passenger rail transportation was originally set at 86% based on a study of rail tourism in 1992. However, it was felt that this percentage was too low, given that rail transportation is not widely used for commuting. The review of tourism proportions in 2007 found that Statistics

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17 Unpublished expenditure estimates consistent with data published in Catalogue 13-213, *Provincial Economic Accounts*
18 Published in Catalogue 51-004-XIB, *Aviation Service Bulletin*
19 Published in Catalogue 52-216-XIE, *Rail in Canada*
20 This may overstate the relative importance of passenger transportation in BC, since diesel consumption in the province may be higher due to the mountainous terrain through which trains must travel.
21 It should be noted that light rail transportation, which is used to transport passengers, is included in urban transit services, not rail transportation.
Canada uses a share of 92% in the TSA, and the BC ratio was increased accordingly.

**Water transportation**

The *Survey of Water Carriers* collects information from all for-hire and government water carriers with total gross operating revenues or expenses of at least $500,000. The results are reported in summary form by Statistics Canada. Survey results used to include financial and operating information for the Pacific Region, but this is no longer available. Even at the national level, only limited financial and operating data is being released. The last year for which sufficient information was published to determine the passenger share of total water transportation activities was 2001. The passenger share of water transportation activities has been kept constant since then (historically, it has been quite stable, so this should not be problematic).

The tourism proportion for water transportation was originally set at 92% based on a survey of BC Ferries passengers in 1991, which found that about 8% of passengers use the ferries to commute to work or school. When contacted in 2007, BC Ferries suggested that this ratio was still appropriate.

**Urban transit, interurban & rural bus, charter bus, scenic & sightseeing bus, and other bus transportation services**

The *Passenger Bus and Urban Transit Survey* collects information on revenues, expenses, operating statistics and employment for a sample of passenger bus and urban transit companies. Some of this information is available at the provincial level.

In the case of urban transit, it is assumed that all activities are related to the transport of passengers. Likewise, taxi & limousine services, charter buses and scenic & sightseeing transportation services are assumed to be entirely devoted to the transportation of passengers.

Intercity buses transport passengers as well as freight. For interurban transit, data from an annual survey is used to determine the percentage of revenues (about 75%) that is related to the transport of passengers rather than freight.

The tourism proportion for urban transit was originally set at 0.8%, based on information provided by BC Transit in 1992. However, when TransLink was contacted in 2007, it was suggested that 3-4% would be more appropriate, and the proportion was adjusted accordingly. For intercity bus transport, it was assumed that 100% of passenger transportation activities were tourism-related.

**Taxi & limousine**

The *Survey of the Taxi & Limousine Service Industry* collects data on revenues and expenses by province from a sample of establishments that are primarily engaged in providing these services. This information is used directly in the calculations.

The tourism proportion for taxi & limousine services was originally based on information from the Vancouver Taxi Owners Association. Although the ratio for taxi transportation (26%) is substantially higher than the national proportion estimated by Statistics Canada. When the BC Taxi Association was contacted in 2007, they felt that the 26% figure was reasonable and therefore the proportion was left unchanged.

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22 Previously, more detailed information was available in Catalogue 54-205-XIB, *Shipping in Canada*, which is no longer being produced. Information is now released annually through Statistics Canada’s *The Daily* release.

23 Published in Catalogue 50-002-XIB, *Surface and Marine Transport – Service Bulletin*

24 Published in CANSIM table 407-0001 and in Catalogue 50-002-XIB, *Surface and Marine Transport – Service Bulletin*
Support Activities
Support activities for air, rail and water services include the operation of airports, air traffic control, harbour and ports, piloting services and the operation of rail terminals. For these activities, it is assumed that the passenger share of revenues in each industry (air, rail, and water) corresponds to the industry’s share of total support activities. Data on support activities by industry is usually collected as part of the annual surveys.

Postal Services
The tourism proportion for postal services (5%) was based on information provided by the Retail Network Planning and Development Branch of Canada Post in 1992. When the proportions were reviewed in 2007, no additional information was obtained, so the share was left unchanged.

How are the estimates for passenger transportation services calculated?

GDP
Statistics Canada produces GDP estimates for each of the tourism-related transportation industries. These estimates are adjusted using the passenger revenue shares calculated based on information from various annual surveys (as described in the previous section). Tourism ratios are then applied to the passenger-related GDP estimates to derive tourism-related estimates for each transportation industry.

Revenue
Given the lack of BC-specific revenue data for many of the transportation industries, it is necessary to rely on other sources of revenue data for many of the industries in this sector. Estimates of tourism revenues in the transportation industries are largely based on consumer spending data from the provincial economic accounts, adjusted by the appropriate tourism ratios. Revenue data for scenic & sightseeing transportation and taxi services is based on published revenue data, adjusted by the tourism ratios for these industries.

Employment and Wages
Employment and wage estimates for the transportation industries are based on SEPH data by industry (4-digit NAICS), adjusted by the applicable tourism proportion.

Wage estimates are derived by multiplying total employment in the industry by the average weekly earnings (including overtime) of hourly-paid workers in the industry. The data is then annualized.

Establishment Counts
Establishment counts for “transportation & related industries” include tourism-related industries in transportation, plus passenger car & RV rental and travel arrangement & reservation services. The latter industries are included with transportation because under the terms of the data-sharing agreement with Statistics Canada, it was not possible to report them separately.

Table 5: NAICS codes included in “transportation & related” establishment counts

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>481</td>
<td>Air transportation</td>
</tr>
<tr>
<td>482</td>
<td>Rail transportation</td>
</tr>
<tr>
<td>483</td>
<td>Water transportation</td>
</tr>
<tr>
<td>485</td>
<td>Transit &amp; ground passenger transportation</td>
</tr>
<tr>
<td>487</td>
<td>Scenic &amp; sightseeing transportation</td>
</tr>
<tr>
<td>4881</td>
<td>Support activities for air transportation</td>
</tr>
<tr>
<td>4882</td>
<td>Support activities for rail transportation</td>
</tr>
<tr>
<td>4884</td>
<td>Support activities for road transportation</td>
</tr>
<tr>
<td>532111</td>
<td>Passenger car rental</td>
</tr>
<tr>
<td>532120</td>
<td>Truck, utility trailer &amp; RV rental &amp; leasing</td>
</tr>
<tr>
<td>5615</td>
<td>Travel arrangement &amp; reservation services</td>
</tr>
</tbody>
</table>

Tourism Tax Revenues
Tax revenues associated with the various forms of transportation are calculated by multiplying tourism expenditures by the GST rate. PST does not apply to transportation services. Data on the value of the air transportation tax paid by
travellers, as well as Coquihalla Highway tolls\(^{25}\) collected from passenger vehicles, is also included.

### Information & cultural industries

This industry group includes publishing, motion picture & sound recording industries, broadcasting, telecommunications, data processing, hosting & related services, and other information services.

#### What’s included in tourism-related information & cultural industries?

The tourism component of this industry is rather small, since movie theatres and telecommunications providers are the only types of businesses that are likely to provide services to tourists. Movie going is not uncommon among travellers, and it is assumed that tourists will consume telecommunication services (e.g., long distance or mobile telephone services) to keep in touch with family, friends or business contacts while they are away from home.

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
<th>Tourism share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>51213</td>
<td>Motion picture exhibition</td>
<td>5.0</td>
</tr>
<tr>
<td>51711</td>
<td>Wired telecommunications carriers (telephone)</td>
<td>1.6</td>
</tr>
</tbody>
</table>

#### Data sources specific to information & cultural services estimates

**Motion picture exhibition**

The *Motion Picture Theatre Survey*\(^{26}\) is a sample survey that collects financial data from establishments that are primarily engaged in exhibiting motion pictures, including those that do so on an occasional basis (e.g., for film festivals). The *Business Register* provides the sampling frame for the survey.

The tourism proportion for this industry is based on an estimate provided by the Motion Picture Theatres Association of Canada in 1992.

**Telecommunications**

The *Annual Survey of Telecommunication*\(^{27}\) targets establishments that provide fixed or mobile telecommunications services. This includes telephone service providers, some of whom provide services to tourists who use phone cards, pay phones, or other mobile telephone services provided by BC industries while travelling.

The tourism proportion for this industry is based on information from a 1992 study of revenues in the accommodation sector, which included information on hotel guests’ usage of long-distance services.

#### How are the estimates for information & cultural industries calculated?

**GDP**

Statistics Canada produces GDP estimates for both the motion picture & video exhibition and telecommunications industries. These estimates are adjusted using the appropriate tourism shares.

**Revenue**

Data on movie theatre revenues comes from the annual survey of the motion picture theatre industry. In the case of telephone expenditures, the revenue data is based on personal expenditure data for BC.

**Employment and Wages**

Employment estimates for these industries are based on information from the Survey of Employment, Payrolls and Hours, which is

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\(^{25}\) This information comes from the Ministry of Transportation, which reported on toll revenues during the period when drivers on the Coquihalla Highway were obliged to pay tolls. This highway became a toll-free road in September 2008.

\(^{26}\) Published in CANSIM table 361-0012 starting with the 2004 reference year (data for 1996/97 to 2004/05 was published in CANSIM table 501-0010)

\(^{27}\) Published in catalogue 56-001-XIE, *Broadcasting and Telecommunications*
published at the 4-digit level. This survey, which is employer-based, does not include the self-employed.

Wage estimates are derived by multiplying total employment in the industry by the average weekly earnings (including overtime) of hourly-paid workers in the industry. The data is then annualized.

Establishment Counts
Information & cultural services are not included in the tourism establishment counts.

Tourism Tax Revenues
Tax revenue estimates are based on revenue data, multiplied by the GST rate for movies, and the combined PST & GST rate for telecommunications.

Finance, insurance, real estate (FIRE) & rental & leasing services
This industry group includes monetary authorities such as the Bank of Canada, banks, trust companies, credit unions, other credit intermediaries, investment bankers, securities & commodities dealers & brokers, portfolio managers, insurance carriers, pension, equity, bonds & other funds, plus real estate and rental & leasing services.

What’s included in tourism-related FIRE & rental services?
Although tourism-related activities account for only a very small percentage of these activities, a number of industries within this group provide services that are used by tourists. For example, tourists use banking services when they purchase foreign exchange or travellers cheques, or make cash withdrawals from automated banking machines. Before they travel, they may purchase health, baggage, or trip cancellation insurance, and owners of recreational vehicles and other types of transportation used for recreational travel within and outside BC must insure these vehicles.

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
<th>Tourism share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>522</td>
<td>Banking services</td>
<td>0.5</td>
</tr>
<tr>
<td>524</td>
<td>Insurance carriers &amp; related activities</td>
<td>2.0</td>
</tr>
<tr>
<td>5311</td>
<td>Lessors of real estate (cottage rental and rental of convention facilities)</td>
<td>0.5</td>
</tr>
<tr>
<td>5321</td>
<td>Automotive equipment rental &amp; leasing</td>
<td>70.0</td>
</tr>
<tr>
<td>5322</td>
<td>Consumer goods rental</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>Imputed rental income, owner occupied dwellings (vacation homes)</td>
<td>1.7</td>
</tr>
</tbody>
</table>

The automotive equipment rental & leasing industry provides services to tourists as well as local residents and businesses. This is also the case for establishments in the consumer goods rental industry, which rents out recreational equipment as well as furniture, equipment, videos and DVDs.

Because individuals who visit vacation homes are considered to be tourists, the definition of the tourism sector includes an estimate of the imputed rental value of vacation homes. This is consistent with the calculation of GDP for the province as a whole. The idea behind including imputed rental income in these estimates is that an owner of a residential property who chooses to live in it rather than rent it out is foregoing some rental income by doing so. In an economy where homeownership is common, this value can be quite significant.

Data sources specific to FIRE & rental service estimates

Finance and insurance
Survey data for financial and insurance services is of limited usefulness because these industries provide services to the personal, business and government sectors, and the information required to determine the personal share of industry revenues is not readily available. The

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28 This industry does not include the retailing of vehicles through sales or lease agreements.
tourism-related revenue estimates for FIRE are therefore based on personal expenditure data from the provincial economic accounts, which provide an indication of how much individuals are spending on banking and insurance services.

**Tourism proportions**
The tourism proportion for banking services is based on an estimate of bank service fees charged to tourists, which was supplied by the British Columbia office of the Canadian Banking Association in 1992.

The tourism proportion for insurance services is based on 1990 data on the insurance of camper trailers, motor homes, recreational trailers, overseas tourist policies, rental vehicle polices and vehicle travel protection policies, obtained from the Insurance Corporation of British Columbia (ICBC) and some private insurers. It should be noted that the nature of the insurance industry has changed somewhat since the original methodology was developed in the early 1990s. At that time, it was felt that travel and medical insurance were most likely to be purchased from travel agents. Given the ease with which it is now possible to make business transactions on the Internet, this may no longer be the case, as travellers can deal directly with insurers online. This may be an area for further study in the future.

**Automotive equipment rental & leasing**
The Annual Automotive Equipment Rental & Leasing Survey\(^{29}\) collects data from establishments primarily engaged in renting or leasing vehicles, including cars, vans, trucks, buses, semi-trailers, utility trailers and RVs. The information is only published at the national level; no provincial data is currently available. Data from the provincial economic accounts is used to estimate BC’s share of the national total.

The tourism proportion for car and truck rental industry was originally set at 75%, based on information from a national study. In 2007, Budget BC (a car rental agency) suggested lowering the ratio to 70% to account for local usage. This is also more consistent with Statistics Canada’s national proportion of 67%, so the ratio was adjusted accordingly.

**Consumer goods rental**
The Annual Consumer Goods Rental Survey\(^{30}\) collects data from establishments that rent consumer electronics & appliances, formal wear & costumes, video tapes & discs and other consumer goods. Of these, only the “other consumer goods” category, which includes rentals of bicycles, boats, ski and other recreational equipment, is likely to deal with tourists. However, the information is only published at the national level; no provincial data is available. Data from the provincial economic accounts is used to estimate BC’s share of the national total.

The tourism proportion for this industry is estimated at 10%.

**Imputed rental income on vacation homes**
The estimate of imputed rental income on owner-occupied dwellings comes from the provincial economic accounts.

The tourism proportion used to estimate imputed rental income on vacation homes was calculated using data on the value of the stock of cottages as a percent of total housing stock\(^{31}\) in the province.

**How are the estimates for the FIRE & rental & leasing services industry calculated?**

**GDP**
Statistics Canada produces GDP data for all of the tourism-related industries in this group.

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\(^{29}\) Published in CANSIM table 352-0008

\(^{30}\) Published in CANSIM table 352-0010

\(^{31}\) This ratio has not been changed since 1992, but should probably be reviewed.
The estimates for each industry are adjusted by the appropriate tourism proportion.

For the auto rental industry, the GDP figure for automotive equipment rental & leasing is first multiplied by an adjustment factor which is equal to the estimated share of passenger vehicle rental revenues in total vehicle rental revenues. The tourism proportion is then applied to this estimate.

For the consumer goods rental industry, the GDP figure for rental & leasing of other equipment is multiplied by an adjustment factor which is equal to the estimated share of recreational goods rental revenues in total industry revenues. The tourism proportion for the industry is then applied to this estimate.

Revenue data for FIRE are estimated by applying tourism proportions to personal expenditures on these services. The imputed rental income associated with vacation homes is not included in the revenue estimates for the tourism sector.

Revenue estimates for vehicle rentals in BC are derived by applying tourism proportions to estimated revenue data. BC revenues are imputed from the national data based on BC’s share of total Canadian personal expenditures on passenger vehicle rentals.

Revenue estimates for recreation equipment rental are derived by applying tourism proportions to estimated revenue data. BC revenues are imputed from the national data based on BC’s share of total Canadian personal expenditures on recreation equipment rentals.

Employment and Wages
Employment and wage estimates for these industries are based on information from SEPH, which is published at the 4-digit level.

Establishment Counts

Finance, insurance & real estate services are not included in the tourism establishment counts. Establishments in the automotive equipment rental & leasing industry are included, but are reported as part of the “transportation & related” sector.

Tourism Tax Revenue
Tax revenue estimates are based on revenue data, multiplied by the current GST and PST rates. An estimate of the tourism portion of the insurance premium tax is also included.

Administrative & support services
The administrative & support services industry includes a variety of services, such as office administration, facilities support services, employment agencies, temporary help services, security services and so on. Most of these do not include tourists among their clientele.

What’s included in tourism-related administrative & support services?
Travel agencies, tour operators, and other travel and reservation services are included in this industry group. The activities of these establishments are considered to be entirely tourist-related.

Table 8: Tourism-related administrative & support services

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
<th>Tourism share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5615</td>
<td>Travel arrangement &amp; reservation services</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Data sources specific to travel arrangement & reservation services estimates
The Annual Survey of Travel Arrangement Services collects data on revenues, expenditures and employment from businesses that are primarily engaged in this activity. The information is currently only published at the Canada level. However, previously released data includes a provincial dimension.

32 Published in CANSIM table 351-0003
The tourism proportion for travel arrangement & reservation services is set at 100%.

How are the estimates for travel arrangement & reservations services calculated?

**GDP**

Statistics Canada produces GDP data for this industry. Since all of the activities of the industry are considered to be tourist-related, there is no need to adjust the estimates.

**Revenue**

Revenue estimates for the travel arrangement & reservation services industry are imputed based on the province’s share of total personal expenditures on air travel and commissions paid to tour operators. This information is used to extrapolate historical data for the industry in BC, which is no longer being published.

**Employment and Wages**

Employment and wage estimates are based on information from the Survey of Employment, Payrolls and Hours, which is published at the 4-digit level.

**Establishment counts**

Establishments in the travel arrangement & reservation services industry are included in the tourism industry counts, but are reported as part of the “transportation & related” sector.

**Tourism Tax Revenue**

Tax revenue estimates for the travel arrangement & reservation services industry are based on estimated revenues multiplied by the applicable GST rate.

**Arts, entertainment & recreation services**

Arts, entertainment & recreation covers a broad range of activities, including the performing arts, spectator sports such as sports teams or clubs, promoters, artists, writers, museums, galleries, zoos, amusement parks, gardens, gambling establishments and recreation facilities.

What’s included in tourism-related arts, entertainment & recreation services?

Most of the industries within this group would include tourists among their clientele. For some, a significant percentage of their business is tourism-related.

**Table 9: Tourism-related arts, entertainment & recreation services**

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
<th>Tourism share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7111</td>
<td>Performing arts companies (theatre, dance, opera)</td>
<td>20.0</td>
</tr>
<tr>
<td>7112</td>
<td>Spectator sports (sports teams, race tracks etc)</td>
<td>10.0</td>
</tr>
<tr>
<td>712</td>
<td>Heritage institutions (museums, galleries, zoos, gardens &amp; parks)</td>
<td>40.0</td>
</tr>
<tr>
<td>7131</td>
<td>Amusement parks &amp; arcades</td>
<td>15.0</td>
</tr>
<tr>
<td>7132</td>
<td>Gambling (casinos &amp; lotteries)</td>
<td>7.5</td>
</tr>
<tr>
<td>7139</td>
<td>Other amusement &amp; recreation:</td>
<td></td>
</tr>
<tr>
<td>71391</td>
<td>Golf courses &amp; country clubs</td>
<td>24.5</td>
</tr>
<tr>
<td>71392</td>
<td>Skiing facilities</td>
<td>75.0</td>
</tr>
<tr>
<td>71393</td>
<td>Marinas</td>
<td>70.0</td>
</tr>
<tr>
<td>71394</td>
<td>Fitness &amp; recreational sports centres</td>
<td>2.0</td>
</tr>
<tr>
<td>71395</td>
<td>Bowling centres</td>
<td>15.0</td>
</tr>
<tr>
<td>71399</td>
<td>Other amusement &amp; recreation</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Data sources specific to arts, entertainment & recreation services

A number of different surveys collect information on arts, entertainment & recreation services. These surveys have all been revamped in recent years, as data is now being collected based on the sampling frame (the Business Register) used for other industry surveys. Previously, much of the data for arts, entertainment and recreation was reported based on activities rather than standard industry definitions.

**Performing Arts Companies**

The Survey of Performing Arts collects information on the financial performance and characteristics of the performing arts industry every two years (starting with 2004 data). The industry includes theatre, musical theatre and opera, dance, musical groups & artists and other performing arts companies. Nationally,
data is available for each of the industries within this group. At the provincial level, the information is only published for the industry as a whole. Data for the years before 2004 is reported on an activity rather than industry basis.

The tourism proportion for performing arts companies was initially set at 15%, based on information supplied by Theatre BC. The percentage was increased slightly to 16% in a subsequent review of tourism proportions. In 2007, when Theatre BC was contacted, it was suggested the proportion should be increased to account for regional shows throughout BC, where nearly all of the paying audience consists of tourists, so the ratio was revised up to 20%.

**Spectator Sports**

The *Survey of Spectator Sports, Event Promoters, Artists & Related Industries* collects financial and operating data from a sample of establishments in the industry. The information is published at the national level, but BC Stats has access to data for BC under a data-sharing agreement with Statistics Canada. Data for the years before 2006 is reported on an activity rather than industry basis.

The tourism proportion for spectator sports was originally set at 5%, based on an estimate supplied by the Vancouver Canucks hockey team. For race tracks, the tourism proportion was set at 15%, based on an estimate provided by Racetracks of Canada. A subsequent review of tourism proportions suggested that the ratio for spectator sports, which includes both professional sports teams and racetracks, should be higher and the proportion was revised up to 10%.

**Heritage Institutions**

The *Survey of Heritage Institutions* collects financial and operating data from various heritage institutions, including art museums & galleries, museums, archives historic & heritage sites and zoos and botanical gardens. The industry group also includes national, provincial and nature parks, nature centres, conservation areas and wildlife sanctuaries.

Canada-level information for heritage institutions is published by Statistics Canada on CANSIM. Provincial data is reported in Catalogue 87F002XIE. Data for the years before 2004 is reported on an activity rather than industry basis.

The tourism proportion for heritage institutions is currently set at 40%. In 1992, the Canadian Museums Association indicated that 60% of visitors to museums across the country could be classified as tourists. A study of botanical and zoological gardens in the 1990s suggested that about 70% of visitors were tourists. The 40% figure reflects the fact that the industry group includes some activities (e.g., archives) that are less likely to be visited by tourists. However, it is possible that this ratio should be reviewed.

**Amusement & Recreation Services**

The *Survey of Amusement & Recreation Services* collects financial and operating information from amusement parks & arcades, golf courses & country clubs, skiing facilities, fitness & recreational sports centres, and other amusement & recreation facilities. The information is only published at the national level, but BC Stats has access to data for BC under a data-sharing agreement with Statistics Canada. Data for the years before 2006 is reported on an activity rather than industry basis.

Tourism proportions

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34 Published in CANSIM table 361-0013

35 Published in CANSIM table 361-0008. Additional details by province are available in Catalogue 87F0002XIE, Heritage Institutions

36 Published in CANSIM table 361-0015
The tourism proportion for amusement parks & arcades has remained at 15% since 1992, when it was set at the same level as that for horse race tracks.

The tourism proportion for gambling operations remains at 7.5%. This figure is based on an estimate provided by the Casino Council of BC in 1992.

The tourism proportion for golf courses & country clubs was originally based on information from a study commissioned by the BC Ministry of Tourism, and was set at 10%. Further research suggested that this ratio was too low and it was subsequently adjusted up to 20%. In 2007, the BC Golf Association provided a study that suggested 24.5% was more appropriate. This was consistent with data on activity participation among tourists, so the tourism proportion has been increased to 24.5%.

The tourism proportion for skiing facilities has remained at 75%. This figure is based on information provided by the Canada-West Ski Areas Association in 1992.

The tourism proportion for marinas (70%) is based on information provided by the BC Marine Trade Association in 1992.

The tourism proportion for fitness & recreational sports centres (2%) is based on information provided by the Pacific Coast Curling Association in 1992. The low percentage reflects the fact that this industry primarily provides services to local residents.

The tourism proportion for bowling alleys (15%) is based on an estimate provided by the Bowling Proprietors Association of BC in 1992.

For other amusement and recreation services, which includes a variety of activities such as tourist guide services, hunting and fishing guide services, sports clubs, dance clubs, amusement rides, recreational clubs, summer day camps, trail riding and pool halls, the tourism proportion is estimated at 35%. This proportion is based on the mix of industry activities and revenues. Tourism proportions for some of the activities in this group (e.g., guiding services or white-water rafting) are estimated at 100%; others (e.g., recreational clubs) are not likely to be providing services to tourists.

How are the estimates for arts, entertainment & recreation services calculated?

**GDP**

Statistics Canada produces GDP estimates for performing arts, spectator sports & related industries (NAICS 711), heritage institutions (NAICS 712), gambling (NAICS 7132) and other amusement & recreation industries (NAICS 713-7132).

A weighted-average tourism proportion for these four groups is calculated based on revenue data for all of the industries listed in the previous section. This is used to estimate tourism-related GDP in the arts, entertainment & recreation services industry.

**Revenue**

Revenues of performing arts, spectator sports companies, heritage institutions, amusement parks and arcades, golf courses & country clubs, skiing facilities, marinas, fitness & recreational sports centres, bowling centres and other amusement & recreation services come from unpublished and published data from the surveys described in the previous section. For gambling activities, estimates of personal expenditures on gambling are the basis of the revenue data.

Revenue estimates are multiplied by the relevant tourism shares in order to estimate tourism revenues in arts, entertainment & recreation services.
### Employment and Wages

Employment and wage estimates are based on information from the Survey of Employment, Payrolls and Hours, which is published at the 4-digit level.

### Establishment Counts

Tourism establishment counts include all of the establishments in this industry group (NAICS codes 711, 712 and 713).

### Tourism Tax Revenues

Tourism tax revenue estimates for this industry are calculated by multiplying total revenues by the current GST rate. PST does not apply to most of the services provided by this industry.

### Accommodation & Food Services

This industry, together with transportation, has the most clearly recognizable link to the tourism sector. The accommodation industry in particular is primarily tourist-oriented, although it does provide other services (e.g., facilities for large gatherings such as weddings and other parties). The food services & drinking places industry also derives a considerable amount of business from travellers, but is more likely to be serving local residents.

#### Table 10: Tourism-related accommodation & food services

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
<th>Tourism share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation services (721):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotels</td>
<td></td>
<td>90.0</td>
</tr>
<tr>
<td>Motels</td>
<td></td>
<td>90.0</td>
</tr>
<tr>
<td>Vacation rentals</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>Campgrounds</td>
<td></td>
<td>95.0</td>
</tr>
<tr>
<td>B&amp;Bs, fishing lodges &amp; guide outfitters, etc</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>Food services (722):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7221</td>
<td>Full-service restaurants</td>
<td>22.5</td>
</tr>
<tr>
<td>7222</td>
<td>Limited-service eating places</td>
<td>22.5</td>
</tr>
<tr>
<td>7223</td>
<td>Special food services (caterers &amp; mobile caterers, including lunch wagons &amp; snack trucks)</td>
<td>10.0</td>
</tr>
<tr>
<td>7224</td>
<td>Drinking places (bars, lounges &amp; night clubs)</td>
<td>22.5</td>
</tr>
</tbody>
</table>

### Data sources specific to accommodation & food services

#### Accommodation Services

The Annual Traveller Accommodation Survey collects financial and operating data, together with information on the business characteristics (type of revenue and type of client from a sample of all establishments classified to the accommodation services industry. Virtually all of the activities of the industries in this group are tourism related.

BC Stats compiles monthly room revenue estimates for each type of accommodation from hotel tax records. This information is reported in the monthly Tourism Sector Monitor.

#### Tourism proportions

The tourism proportion for hotels was originally set at 95%, based on information provided by the BC and Yukon Hotel Association. This proportion was subsequently reduced to 90% to allow for the possibility that some of the non-accommodation services provided by hotels (e.g., food services and rental of facilities) are used by local residents.

For motels, the proportion was originally set at 85%, based on information from a survey by the BC Motels, Campgrounds and Resorts Association in 1987. Although motels are sometimes used as temporary residences by locals, they are less likely to be providing food services and other facilities used by local residents. Therefore it was thought that the tourism proportion for motels should be similar to that for hotels, and the ratio was adjusted up to 90%.

When the proportions were reviewed in 2007, the BC and Yukon Hotel Association agreed that 90% seemed reasonable for hotels and motels. BC Lodging and Campground Association suggested 85-90% for hotels in particular to account for local usage of various...

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37 Published in CANSIM table 351-0002
amenities offered, such as food services and wedding/catering services.

Vacation rentals are accommodations such as cabins and housekeeping cottages, or condos that are rented out to vacationers on a temporary or longer-term basis. It is assumed that all vacation rentals are used by tourists.

For campgrounds, the tourism proportion was originally set at 89%. This was based on a national study of recreation and vacation camps, as well as a 1989 study which suggested that permanent occupancy rates for mixed campgrounds was approximately 10%. The tourism proportion for campgrounds is currently set at 95%, which assumes that about 5% of campground use is by local campers or permanent occupants.

For B&Bs, fishing & hunting lodges, guest ranches and other types of accommodation, it was assumed that the tourism proportion was 100%.

Food services & drinking places
The annual Survey of Food Services and Drinking Places\textsuperscript{38} collects financial and operating data from a sample of establishments classified to the food services and drinking places industry. This includes establishments that are primarily engaged in preparing meals, snacks and beverages, to customer order, for immediate consumption on and off the premises.

A monthly industry survey also reports on revenues for full-service and limited-service eating places, special food services (e.g., caterers) and drinking places.

Tourism proportions
For food and beverage services, the tourism proportions were obtained from a provincial survey by the Restaurant and Food Services Association of BC. The ratio for licenced restaurants was set at 29%, while tourists were estimated to account for 24% of business at other types of restaurants and 25% of caterer business. The ratio for caterers was based on information provided by Princess Mary Caterers of Victoria in 1992. The ratio for drinking places was set at 27%.

In 2007, the BC Food and Restaurant Association’s Western office was contacted. For all services (full, limited, caterers, and drinking places), their estimated ratio for all of Canada was 14% for domestic tourism, and 5% for foreign tourism, for a combined ratio of 19%. It was suggested that the ratio would be higher in BC—somewhere between 20% and 25%. This is consistent with Statistics Canada’s current ratio for BC of 20% for “total food and beverage services”. The original assumption that tourists would be more likely to visit full-service restaurants than limited service eatery was also revisited. Based on this information the BC ratio was changed to 22.5% for full-service restaurants, limited service eating places and drinking places. The 27% ratio for other food services, which includes mobile food services and airline caterers, as well as establishments providing prepared food to hospitals, school and company cafeterias, or catering for social events, was too high, and the ratio was adjusted down to 10%.

How are the estimates for accommodation and food services calculated?

GDP
Statistics Canada produces GDP estimates for traveller accommodation and RV Parks, recreational camps and room & board.

Estimates of GDP for hotels, motels, vacation rentals & campgrounds, saltwater & freshwater fishing lodges and other types of accommodation are generated based on revenue data from the traveller accommodation survey, together with data from the monthly room revenue report. The methodology

\textsuperscript{38} Published in CANSIM tables 355-0005 (annual) and 355-0006 (monthly)
currently used by BC Stats assumes that the GDP to revenue ratio is the same for all types of accommodation providers. The appropriate tourism proportion is then applied to the GDP estimates in order to obtain a tourism GDP estimate for the accommodation service industry.

For food services & drinking places, GDP estimates are allocated by kind of business using data from the annual and monthly surveys.

**Revenue**

Revenue data for accommodation services is derived from the information in the monthly room revenue report. However, since accommodation is just one source of revenue in the industry, the estimates are adjusted by the ratio of total revenue to accommodation revenue from the Traveller Accommodation Survey. Tourism ratios are then applied to the estimated revenue data.

For food services and drinking places, the revenue estimates come from the annual and monthly surveys, adjusted by the appropriate tourism proportions.

**Employment and Wages**

Employment estimates are based on information from the Survey of Employment, Payrolls and Hours, which is published at the 4-digit level.

**Tax Revenues**

Room tax estimates for the accommodation services industry are based on information from hotel tax records. Additionally, it is assumed that about 10% of accommodation and 25% of the receipts of food services and drinking places are related to the sale of liquor, and therefore subject to the provincial liquor sales tax. It is also assumed that about 5% of hotel sales are subject to PST.

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**Other private sector services**

This industry group includes repair & maintenance; personal & laundry services, pet care, photo finishing, parking lots & garages and other personal services.

**What’s included in other tourism-related private sector services?**

Other private sector industries providing services to tourists include the motor vehicle repair industry, as well as hair salons, parking garages, laundry and photofinishing services. As well, the activities of local chambers of commerce, tourism associations and other business organizations help promote tourist activities.

**Table 11: Other tourism-related private sector services**

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
<th>Tourism share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8111</td>
<td>Automotive repair &amp; maintenance</td>
<td>2.0</td>
</tr>
<tr>
<td>8121</td>
<td>Personal care services</td>
<td>2.0</td>
</tr>
<tr>
<td>8123</td>
<td>Dry cleaning &amp; laundry services (including coin-operated laundries)</td>
<td>5.0</td>
</tr>
<tr>
<td>8129</td>
<td>Other personal services (including photo finishing &amp; parking services)</td>
<td>2.0</td>
</tr>
<tr>
<td>8139</td>
<td>Business, professional, labour &amp; other membership organizations (chambers of commerce, tourism associations, restaurant associations, etc)</td>
<td>5.0</td>
</tr>
</tbody>
</table>

**Data sources specific to other tourism-related private sector services**

**Automotive Repair & Maintenance**

The annual Survey of Automotive Repair & Maintenance Services collects financial and operating data from a sample of all establishments classified to the industry.

The tourism proportion for this industry (2%) is based on information supplied by PetroCanada in 1992.

**Personal Care Services**

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39 Based on information from the Annual Traveller Accommodation Survey

40 Published in CANSIM table 361-0006
The Annual Survey of Personal Services collects financial and operating information from a sample of establishments classified to the personal services industry. The industry includes barber shops, beauty salons, other personal care services (e.g., spas and tanning salons), funeral services, dry cleaning & laundry services, pet care, photo finishing, parking lots and garages, and a variety of other services, ranging from genealogy research and astrology to house sitting services.

Tourism proportions
The tourism proportion for personal care services is based on information provided by the Salon Owners Club of BC in 1992. The tourism proportion for parking lots (2.5%) is based on estimates obtained from Robbins Parking in 1992. The proportion for the broader industry group, which also includes a variety of other activities, only some of which would be considered tourism-related, was set to 2%.

The tourism proportion for laundries and dry cleaners was originally set at 0% in 1992. However, since tourists do use laundromat facilities, this proportion has since been increased to 5%.

Five percent of activities related to grant making, civic, and professional and similar organizations is assumed to be tourist-related.

How are the estimates for other private-sector tourism-related services calculated?

GDP
Statistics Canada produces GDP estimates for automotive repair & maintenance, personal care services & other personal services, dry cleaning & laundry services and grant-making, civic & professional organizations. Tourism GDP estimates for these industries are calculated by applying the relevant tourism proportions to the GDP data.

Revenue
Revenue estimates are based on information from annual surveys, combined with personal expenditure data from the provincial economic accounts. For business, professional, labour unions & other services, the revenue estimate is calculated using wage data for the industry as a proxy, since revenue estimates are not available.

Employment and Wages
Employment estimates are based on information from the Survey of Employment, Payrolls and Hours, which is published at the 4-digit level.

Tourism Tax Revenues
Estimates of tourism tax revenues for this industry group are calculated by applying PST and GST rates to tourism revenues.

Public Sector Services
Public sector services include education, health care & social assistance and public administration.

What’s included in tourism-related public sector services?
Some public sector establishments provide services that are either used by tourists, or promote tourism activities in the province. For example, some post-secondary institutions host short residential programs geared to “educational tourists” (e.g., Elderhostel). These programs contribute a small but significant amount of money to the annual operating revenue of BC universities. The province’s health care system provides services to tourists who need emergency and other medical care while travelling.

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41 Published in CANSIM table 359-0001

42 When the methodology was originally developed, it was assumed that tourists would seek medical attention only at
Within the provincial government sector, Tourism BC, together with other government agencies, is involved in promoting tourism or otherwise facilitating tourism-related activities in the province. These activities are included in the tourism sector indicators.

### Table 12: Tourism-related public sector services

<table>
<thead>
<tr>
<th>NAICS code</th>
<th>Description</th>
<th>Tourism share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6113</td>
<td>Universities (accommodation services)</td>
<td>0.4</td>
</tr>
<tr>
<td>622</td>
<td>Hospitals (emergency care)</td>
<td>1.7</td>
</tr>
<tr>
<td>912</td>
<td>Provincial government (e.g., Tourism BC, Parks Branch)</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Data sources specific to tourism-related public sector services

Data for tourism-related public sector services primarily comes from public accounts sources.

Tourism proportions

For universities the proportion is based on information obtained from selected institutions (University of Victoria, UBC and Camosun College). The proportion was originally set to 0.5% in 1992. When the proportions were reviewed in 2007, the ratio was revised to 0.4%, based on analysis of a study by Simon Fraser University.

For hospitals, the tourism proportion (1.7%) is based on information provided by Vancouver General Hospital in 1992.

For provincial government, the tourism proportion is based on the share of total general fund current expenditures that is allocated to agencies such as Tourism BC or the Parks Branch of the Ministry of Environment. These agencies account for about 0.2% of total government spending⁴³.

Although municipal golf courses should ideally be included in the estimates, there is currently no available estimate of a tourism proportion for this industry, so these activities are not included up in the tourism estimates. It should be noted that private golf courses that are stand-alone operations with their own financial reporting are be included.

**How are the estimates for tourism-related public sector services calculated?**

**GDP**

Statistics Canada publishes GDP data for universities, hospitals and the provincial government. The tourism proportions for these public sector industries are applied to the GDP estimates to derive tourism GDP figures.

**Revenue**

There are no revenues associated with public sector activities.

**Employment and Wages**

Employment estimates are based on information from the Survey of Employment, Payrolls and Hours, which is published at the 4-digit level.

**Tax Revenue**

The only source of tourism tax revenue in the public sector is for universities, which are assumed to charge GST on revenues from some of their residential programs.

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⁴³ It is possible that this ratio is too low, since some general fund expenditures go to support hospitals, schools and post-secondary institutions. This issue may be worth further examination.