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Human Resource Module of the Tourism Satellite Account -

A Pilot Study for Newfoundland and Labrador 1997 to 2009

**FINAL REPORT
January 14, 2011**

**Income and Expenditure Accounts Division
Statistics Canada**

Canada 

This paper reports on the Human Resource Module (HRM) of the Tourism Satellite Account – A pilot study for Newfoundland and Labrador developed by Statistics Canada. The pilot study provides detailed information on employment related to tourism in Newfoundland and Labrador. Information on wages and salaries, number of jobs and hours worked by occupation are included. The data are also disaggregated by age, gender and immigration status. This study shows that it is feasible to produce a Human Resource Module for a small province like Newfoundland and Labrador.

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Highlights

- Newfoundland and Labrador is the second province to pilot test the Human Resource Module (HRM) at a regional level. It was a success. The tourism labour market estimates for the province compared well with those of the national HRM.
- Tourism industries in the HRM include five industry groups which are defined as follows: transportation, accommodation, food and beverage services, recreation and entertainment and travel services. Generally speaking an industry is considered a tourism industry if it would cease to exist, or continue to exist only at a significantly reduced level of activity, as a direct result of the absence of tourism.
- The HRM provides the following three main human resource statistics for the tourism sector as a whole and for each tourism industry group: jobs, hours and compensation. These statistics are also available by gender, by work status, by age group, by immigrant status and by occupation.
- All statistics provided by the HRM are related to the production of tourism industries. For example, statistics concerning jobs are about the number of jobs required to produce commodities in tourism industries *whether the commodities produced were consumed by visitors or by local residents*.
- With this pilot study, estimates are available annually for Newfoundland and Labrador over a 13 year period, from 1997 to 2009.
- In 2009, the tourism sector in Newfoundland and Labrador accounted for 19,346 jobs or 9.4% of all jobs in Newfoundland and Labrador.
- The food and beverage services industry group was the largest employer with 10,107 jobs. The second largest employer was transportation, with 3,698 jobs, followed by accommodation, with 3,218 jobs. The recreation and entertainment industry group was responsible for 1,916 jobs while travel services provided 407 jobs.
- Working hours were shorter in tourism industries in Newfoundland and Labrador (33.9 hours per week) compared to jobs economy-wide (34.6 hours) in 2009. The shorter work week is explained partly by the higher proportion of part-time jobs in tourism.
- Hourly compensation was lower in tourism industries in Newfoundland and Labrador compared to tourism industries nationally.
- Ten main occupational groups accounted for 60.7% of all employee jobs in tourism industries in the province. The top five occupations of the tourism sector were in food and beverage services.
- More than thirty percent of employee jobs in tourism (5,975 jobs) were held by teenagers or young adults. Three out of four young adults worked in food and beverage services industries and almost six out of ten worked part-time.
- Older workers, aged 45 years or more, were the second largest group of workers (5,757

- employee jobs) in tourism in the province. Eight out of ten older workers worked full-time. They were employed more evenly across the different tourism industry groups than teenagers or young adults. Older employees in tourism industries were paid twice as much as young adults on an hourly basis (\$16.94 versus \$8.50) in 2009.
- Immigrants are found in all of the tourism industries holding 4.1% or 763 tourism jobs. Most of these jobs were in food and beverage services (74%), followed by transportation (17%).
 - Since 2003, immigrants working in Newfoundland and Labrador's tourism industries earned lower wages than non-immigrants and worked longer hours.

1. Introduction

The aim of this study was to test the possibility of extending the Tourism Human Resource Module for a province with a relatively small population. Newfoundland and Labrador volunteered for this pilot study¹. The exercise was a success, albeit there were some limitations which are described in the conclusion.

The objective of the Human Resource Module (HRM) is to provide timely and reliable statistics on the human resource dimension of tourism. Up until 2009, the HRM was done only at the national level. In March 2010, as a first pilot study on a regional module, the HRM was compiled for the province of Ontario.

Both the Canadian Tourism Satellite Account (CTSA) and the National Tourism Indicators (NTI) already carry some information on the number of jobs generated by tourism at the national level.² The HRM complements and enhances the analytical capacity provided by the CTSA and the NTI, allowing for a broader insight into tourism's role in the economy by providing more detailed human resource information.

For example, human resource planning involves all persons working in tourism, regardless of whether their job comes directly from serving a visitor or from serving a local resident. Consequently, the total number of jobs in tourism industries is a major focus of the HRM and is much broader than the CTSA and the NTI, which portray only the jobs directly attributable to visitor spending. In addition, it should be emphasized that the HRM uses the number of jobs as its key measure of employment and not the number of people employed.

The HRM serves as a useful planning and forecasting tool for policy makers in the areas of tourism, employment and training. Various tourism-affiliated agencies, academics, and decision-makers in tourism will also be able to use it for research and analysis, planning and development. An extension to the provincial level is intended to make the HRM more relevant to these audiences and purposes.

Outlining the rest of the report, the scope of the study is described in the next section followed by the methodology used for Newfoundland and Labrador. Selected results are then discussed to demonstrate analytical uses of the HRM at the provincial level. Conclusions and future work are discussed in the last section.

Appendix A and B discuss the accounting frameworks behind the HRM, key tourism concepts and definitions from the CTSA, and various labour concepts and definitions from the Canadian System of National Accounts (CSNA). Appendix C summarizes the data sources and Appendix D outlines the general methodology used at both the national and provincial level. Appendix E provides a list of North American Industrial Classification System (NAICS) industries included in the industry groups used by the HRM, while Appendix F lists the occupations. A summary of the tables available in the HRM is included in Appendix G. A glossary of terms and a list of references are also provided.

2. Scope of study

The HRM provides a snapshot of the tourism industries and occupations they comprise as well as insights into trends over time. Analyses can be made on employment, hours worked

¹ The study was made possible with joint funding from the Canadian Tourism Human Resource Council, the Department of Tourism, Sport and Recreation of Newfoundland and Labrador and Hospitality Newfoundland and Labrador.

² Some provincial information on the number of jobs generated by tourism was provided in "The Provincial and Territorial Satellite Accounts for Canada, 1998", National Income and Expenditure Accounts Technical Series, June 2003.

and employment earnings starting from 1997. Derived variables, such as number of full-time equivalents, average hourly earnings and average annual hours worked per job can also be examined.

These key statistics of the HRM can be analyzed according to various characteristics of the jobs (employee or self-employed, full-time or part-time, occupation group) and the characteristics of the persons holding them (gender, age group, immigrant status). Information by occupation is also available. Comparisons can be made to the Canadian System of National Accounts (CSNA) employment estimates for the overall economy and for selected industries as well as Canadian Tourism Satellite Accounts and National Tourism Indicators aggregates.

The scope of this study is similar to the most recent national study³ with the exception that the data refer to Newfoundland and Labrador. The information on the number of jobs, hours worked and employment earnings is presented for the same industry groups including for full- and part-time jobs. The information is also available according to the same characteristics of employees (gender, age group and immigrant status) and the same occupations.

In particular, the HRM for Newfoundland and Labrador provides annual estimates for the years 1997 up to 2009. These estimates are based on provincial data from the Canadian Productivity Accounts⁴ which is a key input to the HRM, as well as Labour Force Survey data. Census data for 2001 and 2006 are incorporated along with the NAICS 2002 industry classification and NOC-S 2006 occupation classification.

3. Regional methodology

The methodology used at the national level is also used for Newfoundland and Labrador, since the same data sources are available at the provincial level. However some elements of the national methodology need further explanation when applied to a province.

Information on the occupational distribution of jobs comes from the Census and is available both for Canada and at the provincial level. From this information a number of the most prevalent occupations are selected for each tourism industry group and a residual category is created by amalgamating together all other occupations with fewer jobs. Results are then made available for each of the selected main occupations. More details on this process are available in Appendix D: Methodology in step 3. The selection of main occupations was not changed for Newfoundland and Labrador in order to ensure comparability of results between provincial and national data. However, a few of the main occupations had a lower ranking for Newfoundland and Labrador, such as program leaders and instructors in recreation, sports and fitness.

Cells in the HRM tables are suppressed whenever the estimated number of jobs is less than 20. Below this threshold, the data are considered confidential. Sometimes other cells (that have 20 jobs or more) are suppressed as well when the number of jobs in confidential cells can be calculated residually.

It should be noted that data related to the air transportation industry in Newfoundland and Labrador are confidential and not shown for the whole period (1997 to 2009) because of the high degree of concentration in this industry. The data, of course, are included in the totals for the transportation industry. Furthermore, data related to travel services are suppressed for the year 2004. This is to avoid residual disclosure of confidential data on travel services for Prince Edward

³ Monique Bisailon, Human Resource Module of the Tourism Satellite Account, 2009, National Income and Expenditure Accounts Technical Series, Catalogue no.13-604 no. 66, Statistics Canada, Ottawa, May 2010.

⁴Labour statistics consistent with the System of National Accounts – Fourth quarter 2009, Canadian Productivity Accounts, Income and Expenditure Accounts Division, Statistics Canada, The Daily, March 16, 2010. Data from the Canadian Productivity Accounts (CPA) are consistent with the Canadian System of National Accounts (CSNA).

Island. When applying the confidentiality rules, data for recreation and entertainment were suppressed for the same year.

4. Results

This section will highlight major findings and illustrate some of the types of analyses the HRM can support. The analysis will focus on the year 2009 and on data comparisons between Newfoundland and Labrador and Canada. A brief description of the general economic conditions prevailing in the tourism sector in 2009 is provided first. This description is used as background for the subsequent analyses focussed specifically on human resources.

Travel and tourism worldwide were negatively impacted by the general economic slowdown in 2009. Trips to Canada were down from virtually all major countries, reflecting the decline in economic activity and H1N1 health concerns. Furthermore, the Canadian dollar gained strength during the year, eroding the attractiveness of travel to Canada by U.S. tourists.⁵ Tourism spending in Canada in tourism industries declined 2.2% in real terms in 2009 (compared to a growth of 1.8% in 2008), as spending by international visitors fell 12% and tourism spending by Canadians at home increased 0.7%.⁶

Newfoundland and Labrador's performance was solid in the Atlantic Canada context, with a year-over-year increase in inbound travel for the period ending December 2009.

4.1 Tourism sector

This section aims to compare jobs, hours worked and compensation for the tourism sector in Newfoundland and Labrador with the overall economy in the province and the tourism sector in Canada (see Table 1).

Compensation for all jobs

Compensation⁷ reached \$527 million in 2009 for tourism industries in Newfoundland and Labrador, up 3.3% from the previous year, a weaker growth rate than for the total economy in the province (see Table 1). The increase was mostly the result of higher average hourly compensation (+3.4%). The number of jobs and hours worked per job, on the other hand, were relatively stable.

In 2009, tourism industries accounted for 5.2% of total compensation in the province, a share that has been fairly stable over the last 13 years. Total compensation in tourism industries has gained an average of 5.3% annually since 1997.

⁵ The Economic Review 2009, Government of Newfoundland and Labrador.

⁶ Data adjusted to exclude tourism commodities produced in non-tourism industries.

⁷ Compensation is defined as wages and salaries, supplementary labour income and labour component of income after expenses accruing to the self-employed.

Human Resource Module of the Tourism Satellite Account – A pilot study for Newfoundland and Labrador

Table 1 Total jobs, average weekly hours worked and average hourly compensation, tourism industries and total economy, Newfoundland and Labrador, 2003 to 2009

	2003	2004	2005	2006	2007	2008	2009	percent change 2008 to 2009
Compensation								
	(millions of dollars)							%
Total tourism industries - Newfoundland and Labrador	414	412	421	471	483	510	527	3.3
Total tourism industries - Canada	38,247	39,857	39,904	42,493	45,036	47,445	47,575	0.3
Total economy - Newfoundland and Labrador	8,104	8,346	10,429	10,171	9,713	9,708	10,119	4.2
Number of jobs								
	(jobs)							%
Transportation	3,744	3,476	3,562	3,970	3,841	3,831	3,698	-3.5
Accommodation	3,464	3,442	3,353	3,083	2,920	2,955	3,218	8.9
Food and beverage services	10,560	9,932	10,054	10,818	10,348	10,265	10,107	-1.5
Recreation and entertainment	x	x	2,098	2,004	2,039	1,964	1,916	-2.4
Travel services	x	x	450	436	456	436	407	-6.7
Employee	18,751	18,313	18,650	18,758	18,750	18,635	18,572	-0.3
Self-employed	1,356	970	867	1,555	855	818	774	-5.3
Full-time	14,216	14,019	14,234	14,087	13,715	13,462	13,718	1.9
Part-time	5,890	5,265	5,284	6,226	2,890	5,991	5,629	-6.0
Total tourism industries - Newfoundland and Labrador	20,107	19,284	19,517	20,313	19,605	19,453	19,346	-0.6
Total tourism industries ('000) - Canada	1,587	1,592	1,565	1,575	1,597	1,619	1,609	-0.6
Total economy - Newfoundland and Labrador	205,396	205,274	206,032	211,237	210,029	211,190	206,750	-2.1
Average weekly hours worked per job								
	(hours)							%
Transportation	43.3	43.8	39.3	42.1	40.8	41.0	41.5	1.4
Accommodation	35.3	36.5	37.5	37.7	36.7	36.6	36.7	0.4
Food and beverage services	30.4	30.7	30.3	30.1	29.9	30.5	30.6	0.2
Recreation and entertainment	x	x	28.8	29.2	30.1	32.3	33.0	2.4
Travel services	x	x	32.9	30.2	32.0	36.3	29.9	-17.6
Employee	32.9	33.8	32.8	33.0	32.6	33.3	33.4	0.3
Self-employed	44.2	39.0	38.1	39.9	43.7	46.1	47.3	2.6
Full-time	40.7	40.6	39.4	41.3	40.3	41.7	41.2	-1.2
Part-time	16.7	16.6	16.1	16.1	16.5	16.2	16.3	0.7
Total tourism industries - Newfoundland and Labrador	33.6	34.1	33.1	33.5	33.1	33.8	33.9	0.4
Total tourism industries - Canada	30.1	30.4	29.8	30.0	29.9	29.7	29.0	-2.4
Total economy - Newfoundland and Labrador	34.5	35.1	34.8	35.3	35.2	35.4	34.6	-2.2
Average hourly compensation per job¹								
	(dollars)							%
Transportation	16.86	17.75	19.44	19.10	21.10	21.87	23.12	5.7
Accommodation	12.34	11.99	12.30	14.40	16.17	16.08	14.50	-9.8
Food and beverage services	8.75	8.90	9.11	9.26	10.09	10.89	11.67	7.2
Recreation and entertainment	x	x	13.47	15.86	14.00	15.14	15.53	2.6
Travel services	x	x	15.92	17.74	17.63	16.32	21.49	31.7
Employee :	12.06	12.18	12.64	13.38	14.43	15.01	15.60	4.0
of which wages	10.49	10.64	10.97	11.55	12.48	13.14	13.61	3.6
Self-employed	8.49	9.78	10.62	12.32	12.08	13.26	12.22	-7.8
Full-time	12.32	12.55	13.09	13.84	15.00	15.52	16.03	3.3
Part-time	8.39	8.76	8.90	10.08	10.26	11.35	11.60	2.2
Total tourism industries - Newfoundland and Labrador	11.74	12.04	12.54	13.29	14.29	14.91	15.41	3.4
Total tourism industries - Canada	15.39	15.83	16.43	17.31	18.16	19.96	19.59	-1.9
Total economy - Newfoundland and Labrador	21.94	22.58	28.07	26.8	25.27	25.19	27.41	8.8

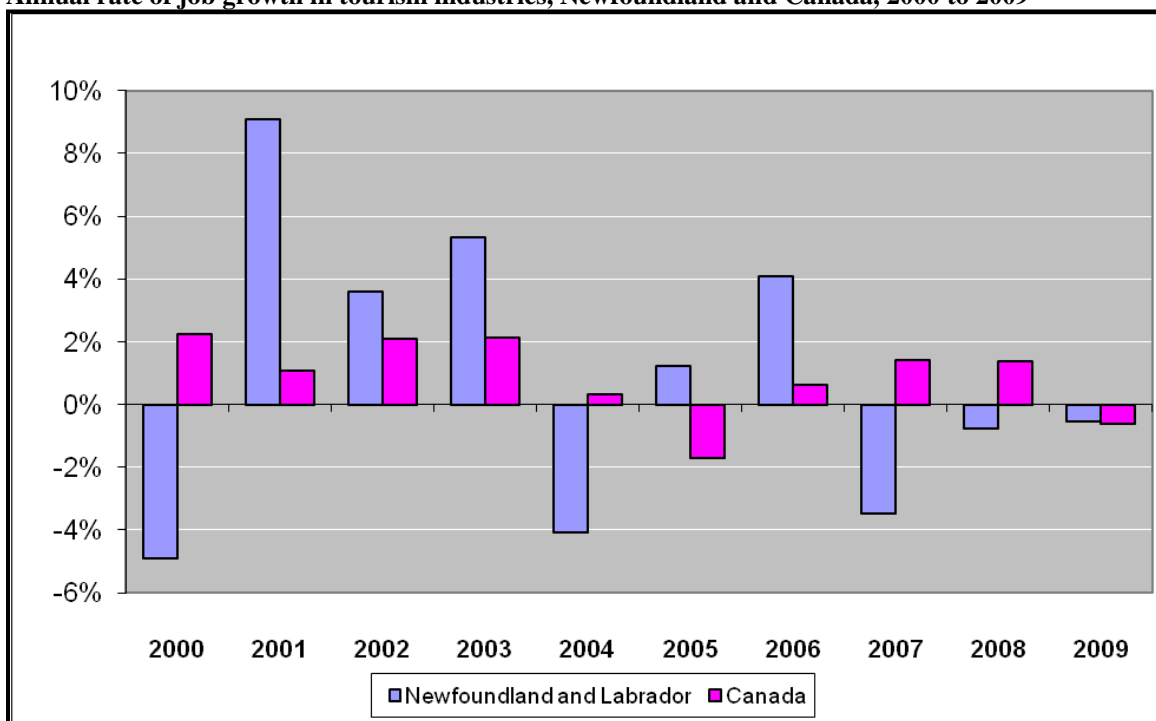
1. Hourly compensation includes wages and salaries, supplementary labour income and labour component of income after expenses accruing to the self-employed.

Jobs

Tourism industries in Newfoundland and Labrador generated a total of 19,346 jobs in 2009. This includes both full-time and part-time jobs, as well as employee jobs and jobs from self-employment. The tourism sector accounted for 9.4% of all jobs in Newfoundland and Labrador in 2009. Tourism jobs have been declining for the past three years, with losses of 967 positions in total.

It should be noted that the number of jobs according to the HRM includes all jobs required to produce commodities in tourism industries *whether they are consumed by visitors or by local residents*. This is larger than if only jobs attributed to visitor's consumption (spending or demand) were taken into account because only a portion of the 19,346 jobs can be attributed to visitors.

Chart 1
Annual rate of job growth in tourism industries, Newfoundland and Canada, 2000 to 2009



When examining the number of employee jobs for 1997 to 2009, there are no dominant trends. However, moderate declines were registered in the last three years. Overall, employee jobs grew by an average of 1.6% per year. The number of self-employment jobs, in contrast, fell during the period, declining an average of 2.9% per year.

In Newfoundland and Labrador, the number of jobs in tourism fell 0.6% in 2009. Canada registered an identical decline. In 2009, 256 full-time jobs were created and 362 part-time jobs disappeared, resulting in a net loss of 107 jobs. Job gains were only recorded in the accommodation industry which added 263 positions in 2009.

Hours worked and hourly compensation

In 2009, a total of 34.1 million hours were recorded in tourism industries, accounting for 9.2% of the 372.1 million hours worked economy-wide in Newfoundland and Labrador. This implies an average work week of 33.9 hours in tourism in the province, up 0.4% from the year before.

Self employed workers represent only 4.0% of the tourism workforce of the province. Their average hourly compensation is less than paid employees (\$12.22 versus \$13.61) but they earn four thousand dollars more per year on average than paid employees owing to their longer work week. More than seven out of ten self employed work on a full-time basis.

Hourly compensation in tourism in Newfoundland and Labrador was \$15.41 per hour in 2009, up 3.4% from \$14.91 the year before but still much lower than the hourly compensation province-wide at \$27.41. The general minimum wage for the province increased on July 1, 2009 to \$9.00 per hour from \$8.00. This contributed to the increase in the hourly compensation in tourism industries.

Over the period 1997-2009, hourly compensation for tourism in the province has always been lower than the national average for tourism industries (see Table 1).

4.2 Tourism industry profiles

The HRM contains aggregated data for five tourism industry groups: transportation, accommodation, food and beverage services, recreation and entertainment and travel services. Appendix E lists the industries included in each industry group of the tourism sector. The following provides selected results that are intended to give an indication of the kinds of industry analyses possible with the HRM.

Food and beverage services

Amongst the tourism industry groups, food and beverage services was the largest employer in 2009. The industry generated more than 10,100 jobs, accounting for 52.2% of all jobs in tourism industries in Newfoundland and Labrador. The number of jobs slipped 1.5% in 2009, driven by losses of part-time jobs.

The food and beverage services industry accounted for 66.2% of part-time jobs in tourism industries in the province, followed by transportation (10.2%). Not surprisingly, the work week in the food and beverage services industry, at 30.6 hours, was the second shortest among all tourism industries and was well below the average work week of 34.6 hours for all jobs in the province.

Overall, jobs in food and beverage services continued to pay the least of all tourism industries, with an average hourly compensation of \$11.67 in 2009.⁸ Even though this was up (+7.9%) from the year before, it remained well below the average of \$15.41 for tourism industries in Newfoundland and Labrador.

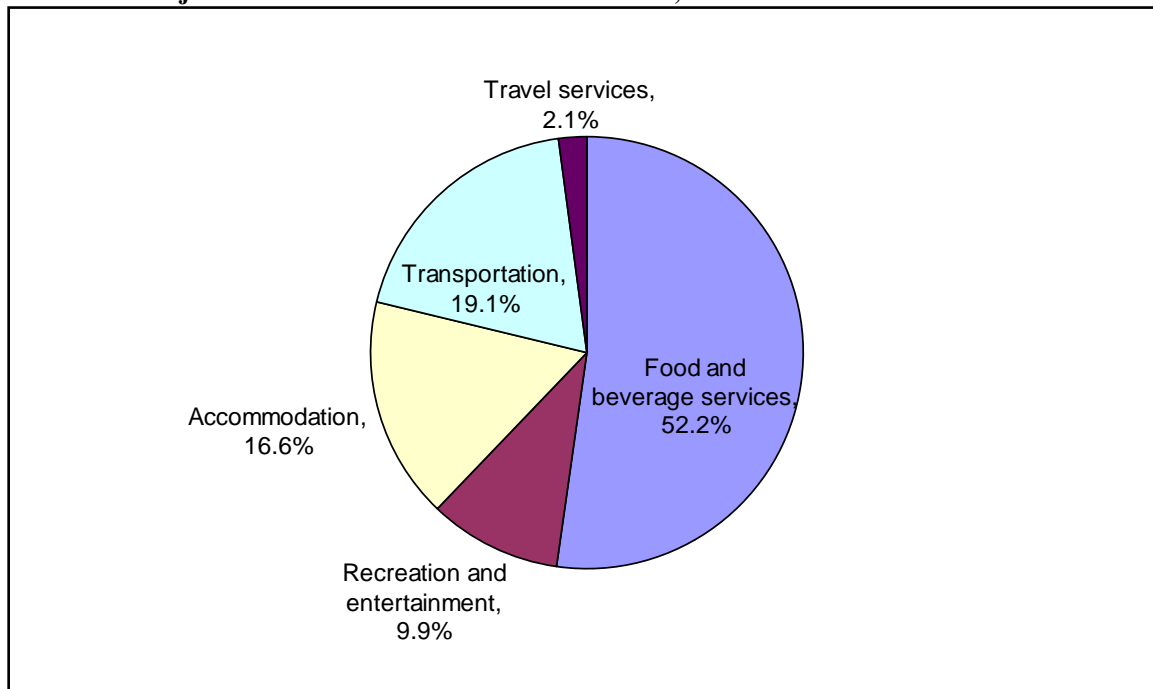
The most common occupation group in food and beverage services was food counter attendants and kitchen helpers, which accounted for one out of four employee jobs in this industry. Approximately forty five percent of all teenagers and young adults in this industry worked as cashiers and kitchen helpers.

⁸ Gratuities are included in these figures. See Appendix C: Data sources to understand how gratuities are calculated.

However, the average hourly wage for the cashiers and kitchen helpers were lower than the provincial minimum wage. Approximately forty five percent of all teenagers and young adults in this industry worked as cashiers and kitchen helpers. The minimum wage for the province was raised from \$8.00 to \$9.00 per hour as of July 1st 2009.

Chart 2

Distribution of jobs in tourism industries in Newfoundland, 2009



Transportation

In 2009, the transportation industry group (which consists of air transportation and other transportation, including rail, water and bus travel, as well as taxis and car rentals) accounted for 3,698 jobs, or 19.1% of all jobs in the tourism sector in Newfoundland and Labrador.

Transportation industries posted significantly fewer jobs (-3.5%) compared to 2008. The losses were concentrated in employee jobs as 153 positions vanished in 2009. This industry supported 230 jobs from self-employment, accounting for 29.7% of all self-employment jobs in tourism.

Jobs in transportation came with a long work week, on average 41.5 hours, more than 7 hours above the average for tourism jobs in Newfoundland and Labrador. One reason for the longer hours is the high proportion of full-time jobs (78.3%).

In addition to a long work week, jobs in transportation are also well paid, with hourly compensation of \$23.12, more than seven dollars above the sector average.

The most prevalent occupation group in transportation was bus drivers and other transit operators, accounting for one out of six employee jobs in the industry. They were paid \$16.08 per hour in 2009.

Accommodation

In 2009, the accommodation industry generated more than 3,200 jobs. This industry group has remained the third largest employer over the entire period 1997 to 2009. This was the only industry to register job gains in 2009.

The number of jobs in accommodation rose 8.9% in Newfoundland and Labrador in 2009. The gain was particularly strong for full-time positions, which grew at twice the pace of part-time jobs. More than sixty percent of the increase in the number of full-time jobs favoured the female workforce.

Hours worked per week in this industry were almost identical to those registered in 2008 (36.7 hours). This was about five hours longer than for the accommodation industry group across Canada.

For this industry group, hourly compensation was down 9.8% in 2009 reaching \$14.50, below the tourism sector's average of \$15.41. On average, jobs in accommodation in Newfoundland and Labrador paid less than those in this industry in Canada.

Light-duty cleaners (such as housekeeping room attendants) were the most predominant occupation in this industry, with six hundred employee jobs in 2009, most of them held by women.

Recreation and entertainment

The recreation and entertainment industry group was the fourth largest employer among the groups included in the HRM, accounting for more than nineteen hundred jobs in 2009. This industry reported a 2.4% drop in the number of jobs compared to 2008.

Jobs in recreation and entertainment came with a longer work week, averaging 33.0 hours, ranking third among tourism industries. Hourly compensation in this industry (\$15.53) was slightly above the tourism sector average for Newfoundland and Labrador (\$15.41). Program leaders and instructors in recreation, sports and fitness were the most common occupation group.

Recreation and entertainment held the largest proportion (32.9%) of self-employed workers with 255 jobs. They worked shorter hours (40.3 hours per week) than the self-employed in the tourism sector overall (47.3 hours per week).

Travel services

Travel services was the smallest tourism industry with a little more than 400 jobs in 2009. The number of jobs in the industry dipped 6.7%, as 2009 was challenging for the tourism sector as a whole. This industry group accounted for only 2.1% of all jobs in tourism industries in the province.

Workers in this industry have the second highest average hourly compensation among all tourism industries. Hourly compensation in this industry group was above the tourism sector average in Newfoundland and Labrador (\$21.49 per hour versus \$15.41). When comparing hours worked, however, the industry group showed 29.9 hours per week versus 33.9 for the sector.

Not surprisingly, travel counsellors is the largest occupation group within the travel services industry group, accounting for nearly half of the industry's employee jobs. Women in this industry accounted for 78.7% of jobs in 2009.

4.3 Occupations in tourism industries

Ten main occupation groups accounted for 60.7% of all employee jobs in tourism industries in Newfoundland and Labrador. Similar to Canada, three occupation groups were dominant: food-counter attendants and kitchen helpers; food and beverage servers; and cooks.

In addition, these dominant occupations were concentrated mainly in one tourism industry group. Eighty six percent of the jobs in the top ten occupations were in the food and beverage services industries. Less than ten percent of the jobs in the top ten occupations were in the accommodation industries and about four percent of the jobs were in transportation.

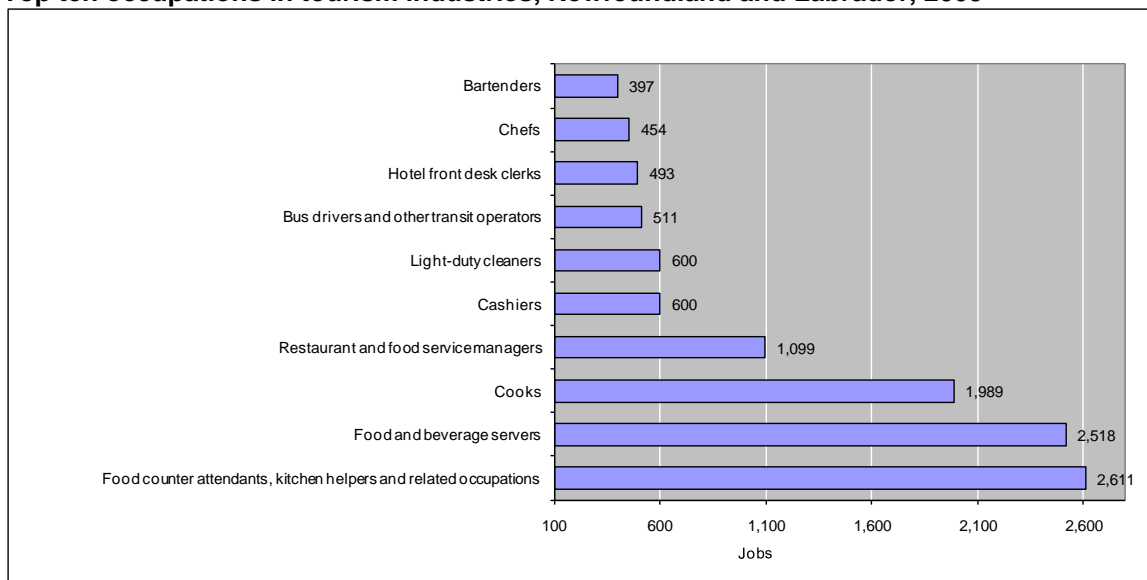
In 2009, three out of the ten top occupation groups were paid above the average annual salary for the tourism sector in Newfoundland and Labrador (\$23,616). Restaurant managers were paid \$34,032 per year; chefs earned \$25,257; and bus drivers received \$24,885.

Bus drivers were the only workers (of the ten main occupation groups) who earned an hourly wage (\$16.08) above the tourism average of \$13.61. When comparing wages for the remaining main occupation groups, light duty cleaners (\$12.77), hotel front desk clerks (\$10.38) and cooks (\$9.47) were paid higher wages per hour than the largest tourism occupation in the province, food counter attendants and kitchen helpers (\$8.60).

Restaurant managers (49.1 hours) and hotel front desk clerks (40.5 hours) worked longer hours per week than the tourism sector average for employee jobs 33.4 hours. Bus drivers and cashiers worked 29.8 and 21.3 hours per week, respectively, well below the tourism average.

Chart 3

Top ten occupations in tourism industries, Newfoundland and Labrador, 2009



4.4 Profile of employees in tourism industries

The HRM provides details concerning three characteristics of employees: gender, age group, and immigrant status. The following highlights some of the results according to these demographics (see Table 2). Note that the following information represents employee jobs only, as data for employee profiles are unavailable for the self-employed.

Gender

Similar to tourism industries Canada-wide, there were proportionately more women than men working in Newfoundland and Labrador's tourism sector in 2009 (54.9%). Women held a total of 10,190 employee jobs, 1,808 more than men. A higher proportion of women working in tourism industries were less than 25 years of age (34.5%), compared to men (29.4%).

Women were under-represented in only one industry group, transportation. Only 23.9% of the employee jobs in the transportation industry were held by women. On the other hand, women were more equally represented in recreation and entertainment industries (48.9%).

In all tourism industries in the province, women had shorter work weeks than their male counterparts, except for the travel services industry. The most significant difference was observed in the accommodation industry (31.8 hours per week compared to men with 49.0 hours). Women were also more likely than men to be in part-time jobs. In 2009, one out of three women worked on a part-time basis compared to one out of four men.

Women working in tourism industries in Newfoundland and Labrador earned an average of \$3.46 less than men (\$11.85 per hour versus \$15.31). This is comparable to tourism industries elsewhere in Canada. There is a noteworthy variation in women's wages, with jobs in travel services and transportation paying the most \$21.80 and \$18.35 per hour, respectively, and jobs in food and beverage services paying the least (\$9.76).

As far as the transportation industry in 2009, the fact that there are five times more male workers aged 45 and over compared to women in the same age brackets, and three times more full-time positions occupied by males could explain the higher labour income for male workers.

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Table 2 Employee jobs, hours and wages by employee characteristics for tourism industries, Newfoundland and Labrador 2009

	Total	Gender		Age group				Immigrant status	
		Female	Male	15 to 24	25 to 34	35 to 44	45 +	Immigrant	Non-immigrant
Number of employee jobs									
	jobs								
Transportation	3,468	829	2,639	266	548	802	1,852	127	3,341
Accommodation	3,070	2,283	787	418	564	781	1,306	43	3,027
Food and beverage services	10,006	5,977	4,028	4,563	1,910	1,521	2,011	566	9,440
Recreation and entertainment	1,662	812	849	x	x	268	502	x	x
Travel services	367	289	78	x	x	134	87	x	x
Full-time	13,153	6,902	6,251	2,579	2,786	2,957	4,831	591	12,562
Part-time	5,419	3,289	2,131	3,396	547	550	926	172	5,247
Total tourism industries	18,572	10,190	8,382	5,975	3,333	3,507	5,757	763	17,809
Average weekly hours worked per job									
	hours								
Transportation	41.0	35.9	42.6	28.9	34.0	43.6	43.6	20.8	41.8
Accommodation	36.2	31.8	49.0	23.7	40.7	40.3	35.9	38.5	36.2
Food and beverage services	30.2	28.3	33.1	20.8	35.6	39.1	39.8	37.1	29.8
Recreation and entertainment	31.9	30.1	33.8	x	x	44.3	38.4	x	x
Travel services	29.4	30.6	25.3	x	x	30.7	37.2	x	x
Full-time	40.4	36.2	45.2	29.8	39.5	44.2	44.4	42.4	40.3
Part-time	16.2	16.7	15.4	14.4	21.4	20.5	17.0	6.4	16.5
Total tourism industries	33.4	29.9	37.6	21.0	36.5	40.5	40.0	34.3	33.3
Average hourly wages per job									
	dollars								
Transportation	20.29	18.35	20.81	11.88	20.72	16.69	22.55	15.44	20.38
Accommodation	12.62	12.48	12.88	7.93	11.54	11.32	15.01	12.65	12.62
Food and beverage services	10.54	9.76	11.52	8.22	10.83	11.72	12.15	9.58	10.61
Recreation and entertainment	13.86	12.91	14.66	x	x	15.21	16.07	x	x
Travel services	20.78	21.80	16.22	x	x	21.63	28.22	x	x
Full-time	14.17	12.31	15.81	8.62	12.78	13.67	17.17	10.57	14.35
Part-time	10.23	9.75	11.03	8.31	13.06	10.74	13.72	19.37	10.11
Total tourism industries	13.61	11.85	15.31	8.50	12.80	13.43	16.94	10.94	13.73

Table 3 Employee jobs, hours and wages by employee characteristics for tourism industries, Canada 2009

	Total	Gender		Age group				Immigrant status	
		Female	Male	15 to 24	25 to 34	35 to 44	45 +	Immigrant	Non-immigrant
Number of employee jobs									
	jobs (in thousands)								
Transportation	191	60	131	15	31	39	106	44	146
Accommodation	213	128	85	62	43	34	74	51	162
Food and beverage services	829	501	327	426	144	112	147	195	634
Recreation and entertainment	223	110	113	86	38	34	65	30	192
Travel services	42	31	11	6	9	8	18	12	29
Full-time	892	458	435	190	200	182	320	230	662
Part-time	605	372	232	404	65	45	91	103	502
Total tourism industries	1,497	830	667	594	265	227	411	333	1,164
Average weekly hours worked per job									
	hours								
Transportation	32.4	26.7	35.0	24.2	31.3	35.6	32.6	33.1	32.1
Accommodation	31.4	29.2	34.6	18.4	34.1	39.5	37.0	37.7	29.4
Food and beverage services	26.8	25.0	29.5	18.3	33.2	36.6	37.3	32.1	25.1
Recreation and entertainment	28.5	26.8	30.2	15.1	36.3	40.8	35.1	31.7	28.0
Travel services	34.3	34.0	35.3	22.4	34.8	38.0	36.6	37.0	33.2
Full-time	37.5	34.9	40.3	27.3	38.3	41.9	40.6	40.9	36.3
Part-time	15.4	15.8	14.8	13.7	19.1	19.9	18.3	16.0	15.3
Total tourism industries	28.6	26.3	31.4	18.1	33.6	37.5	35.7	33.2	27.3
Average hourly wages per job									
	dollars								
Transportation	28.33	25.79	29.22	17.31	23.32	28.93	30.63	23.73	29.77
Accommodation	17.13	15.43	19.27	12.45	16.85	18.06	18.79	19.59	16.15
Food and beverage services	13.92	13.01	15.11	11.03	14.26	15.67	16.42	13.82	13.96
Recreation and entertainment	20.66	19.18	21.94	13.29	19.45	23.00	24.16	20.42	20.70
Travel services	21.68	20.49	24.98	12.69	19.21	23.63	23.80	20.29	22.35
Full-time	18.88	16.31	21.22	12.12	16.90	20.01	22.10	17.23	19.53
Part-time	13.72	13.47	14.15	11.27	15.12	16.88	19.14	15.48	13.34
Total tourism industries	17.76	15.55	20.06	11.68	16.65	19.68	21.76	16.97	18.03

Youth and older workers

Youth aged 15 to 24 years were an important source of labour for the tourism industries in Newfoundland and Labrador. They held more than 5,970 employee jobs in 2009, accounting for 32.2% of employee jobs in tourism. Three out of four young workers were concentrated in the food and beverage services industries.

Older workers aged 45 years and over were also a major source of labour for tourism (31.0%), contributing more than 5,750 employee jobs. Furthermore, older workers were employed more evenly than young adults across tourism industry groups.

Almost six out of ten young workers were likely to be working in part-time jobs in tourism compared to almost two out of ten older workers. Not surprisingly, young adults and teenagers worked fewer hours per week (21.0 hours) relative to older workers (40.0 hours).

Wages of young workers were also considerably lower. The hourly wage among workers in tourism industries aged 15-24 was \$8.50 in 2009, half the wages for employees aged 45 and over in tourism industries (\$16.94). The wage differential between the young and old was the least pronounced in the food and beverage services industry group \$8.22 versus \$12.15.

Immigrants

Immigrants held more than 760 jobs in 2009, accounting for 4.1% of tourism employee jobs. They have been earning lower wages per hour than non-immigrants in Newfoundland and Labrador since 2003, \$2.79 less per hour in 2009. In the transportation industry, wages were notably lower for immigrants as they were paid \$4.94 less per hour in Newfoundland and Labrador compared to non-immigrants. However in the accommodation industry, wages were about the same for immigrants and non-immigrants (\$12.65 versus \$12.62 per hour).

Immigrants represented the largest share of the workforce in the food and beverage services (5.7%), followed by transportation (3.7%).

5. Conclusion

The objective of the pilot study was to test the possibility of extending the HRM to a province with a smaller population. The exercise was a success. The tourism labour market estimates compare well with those of the national HRM and those of the first provincial pilot study undertaken for a larger province. The results for the province of Ontario were published in March 2010. The top five occupational categories for Newfoundland and Labrador were the same as Ontario and Canada. Similar patterns are observed for calculated variables such as average annual hours and average hourly earnings.

Not surprisingly, data cells were suppressed due to confidentiality. In particular, we were not able to show data for Air Transportation and Other Transportation separately because of the high concentration in the air transport industry in Newfoundland and Labrador. Also data for the Travel Services industry for 2004 could not be published in order to protect data confidentiality for the province of Prince Edward Island. Consequently, the labour estimates for Recreation and Entertainment were suppressed in order to avoid residual disclosure. Finally, data found at the more detailed level such as employee profiles were also suppressed in considerably more instances because the number of jobs was too low. We also noted that the data in this province is

more volatile, especially at the occupation level, but the industry trends emerged clearly.

In order to measure the impact of confidentiality on the HRM data for 2009, a percentage ratio was calculated to compare the information suppressed for Newfoundland and Labrador versus Canada. These proportions were derived for both detailed and total occupations. Overall, the results for the tourism sector show that 38% more cells were suppressed when compared to Canada when tabulating data for all occupations. The percentage is higher (44%) when showing data for individual occupations as fewer jobs are reported.

Among tourism industries, the least suppression was in food and beverages services where no cells for all occupations were lost when compared to Canada. Data produced for transportation and accommodation industries also provided good quality data where 13% and 38% additional cells were suppressed when compared to Canada. Moreover, the majority of the confidential cells were pertaining to immigration and non-immigration splits.

Regarding the detailed categories, both full-time and part-time data for recreation and entertainment services lost an additional 63% cells when compared to Canada. This could be partially explained by the fact that this industry was suppressed to avoid residual disclosure for the travel services industry. Finally, travel services was the smallest industry group among all tourism industries and not surprisingly had overall the highest number of cell suppressed. For example, 75% data for both female and male were not available for publication once the comparison was made.

The pilot study gave a comprehensive picture of the labour workforce for Newfoundland and Labrador despite the suppression of some of the detailed data. It will be able to support government tourism will be very useful in monitoring new industry trends such as employment growth of older workers in Newfoundland and Labrador. A recent study concludes that employment growth in Canada was driven by gains among older workers, continuing the upward climb that began in 2001 with the first of the boomers hitting 55.⁹ The HRM for Newfoundland and Labrador leads to a similar conclusion. The number of jobs held by older workers grew for the whole period except for minimal declines in 2003 and 2006.

⁹ The labour market in 2008, February 2009 Perspectives, Statistics Canada – Catalogue no. 75-001-X

Appendix A: Framework

The Human Resource Module (HRM) is based on and rooted in the accounting framework of the Canadian Tourism Satellite Account (CTSA), which follows the international guidelines in Recommended Methodological Framework: Tourism Satellite Account (TSA: RMF).¹⁰ In turn, the TSA: RMF is based on the accounting framework and principles of the internationally recognized System of National Accounts 1993 (SNA).¹¹

Because the HRM uses the same framework, concepts and definitions as the CTSA, results from both can be readily compared. By extension, the HRM results can be compared to those of the Canadian System of National Accounts (CSNA), in particular, to the number of jobs, hours worked and labour income in other industries in the economy. This enhances the analytical capacity of the HRM.¹²

¹⁰ Commission of the European Communities Eurostat, Organisation for Economic Co-operation and Development, World Tourism Organization, United Nations Statistics Division, Tourism Satellite Account: Recommended Methodological Framework, Luxembourg, Madrid, New York, Paris, 2001.

¹¹ Commission of the European Communities Eurostat, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank, System of National Accounts 1993, Brussels, Luxembourg, New York, Paris, Washington, 1993.

¹² Some conceptual differences exist between the Canadian TSA and the international guidelines in the TSA-RMF. See Katharine Kemp and Shaila Nijhowne, "Study of the Canadian Tourism Satellite Account: Comparison of the TSA-RMF and CTSA," report prepared for the Canadian Tourism Commission for the meetings of the Macroeconomics and Statistics Sub-Committee of the World Tourism Organization, March 8-9, 2004 in Madrid.

Appendix B: Concepts and definitions

The Human Resource Module (HRM) carries information on the number of employee and self-employment jobs, full-time equivalent employment, total hours worked and labour income, gross wages and salaries and supplementary labour income. Some of these basic concepts and definitions are described next. They are discussed from a total industry perspective first, that is to say, regardless of the source of demand, tourism or non-tourism.

In the HRM, total employment in an industry is the number of all employee and self-employment jobs in that industry. It should be noted that a job that exists for only part of the year (e.g., 4 months) counts as only a fraction of a job (1/3 of a job) for the year. It should also be noted that a part-time job at 10 hours a week counts as much as a full-time job at 50 hours a week; each is one job. For this reason, jobs are not a good measure of labour inputs to production.

A better measure is full-time equivalent employment in which part-time jobs are converted to full-time jobs on the basis of hours worked. For example, two part-time jobs of twenty hours per week would be equivalent to one full-time job at forty hours per week. Total hours worked is an even better measure of aggregate volume of labour inputs to production, and the one used in the CSNA to calculate labour productivity. The concept here is that of actual hours worked, not usual hours, and of hours worked, not hours paid (see Appendix C.1).

The value of labour inputs to production in an industry is measured by the labour income and a labour component of mixed income for all jobs in that industry. Labour income consists of gross (i.e., before tax) wages and salaries, including tips,¹³ commissions, bonuses, as well as supplementary labour income which covers mandatory and non-mandatory employer contributions to pension plans and social insurance and health plans.¹⁴ Mixed income is the income after expenses of unincorporated business accruing to the self-employed.¹⁵

Work is currently underway to develop estimates on the number of jobs that can be directly attributed to, or generated by, tourism demand. These estimates will provide the link between the HRM and the Canadian Tourism Satellite Account (CTSA) and National Tourism Indicators (NTI). Tourism employment in an industry (concept used in the CTSA and NTI) is the number of jobs generated by, or attributable to, visitor spending on the goods and/or services produced by that industry. The difference between tourism employment and total employment (concept used in the HRM) is the number of jobs attributable to non-tourism (i.e., not directly attributable to tourism demand).

As an example, if the full-service restaurants industry has a total of 100,000 jobs, only the share that is directly associated with tourism (say 25%, or 25,000 jobs) represents the tourism employment in this industry. Similarly, only 25% of the full-time equivalent employment, total hours worked and labour income is attributed to tourism. Derived variables, such as annual average hours worked and annual average wage and salary per tourism job, as well as the average hourly earnings per hour worked per tourism job are assumed to be the same for all jobs in an industry.

At the core of the CTSA and the NTI is the definition of tourism. Tourism is defined according

¹³ The imputation of unreported tips in the CSNA is described in Appendix C, C.1.

¹⁴ Includes Medicare, dental plans, short-term and long-term disability plans, life insurance etc.

¹⁵ Mixed income is found in the CTSA. For the HRM, an imputation is made for the labour component of mixed income. See the discussion of Appendix D: Methodology, Step 1.

to international standards as: “the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited.” Persons who engage in tourism, so-defined, are called visitors. Visitors consist of tourists (those who visit and stay outside their usual environment for at least one night) and same-day visitors.

The definition of tourism is quite broad in that both personal and business travel are included. The international standard does not precisely spell out the notion of usual environment, thereby allowing a country to apply its own specifications. For operational purposes, Canada has defined the concept of usual environment as the area less than 80 kilometres one-way from home.¹⁶ On the other hand, crossing an international boundary is considered tourism regardless of the distance travelled. It should be noted that not all travel is tourism. In particular, the definition rules out several types of travel, including commuting to and from work or school, travel by armed forces and diplomats, as well as migration.

Tourism demand is the spending by Canadian and non-resident visitors on domestically produced commodities. This spending has a direct impact on a wide range of industries, some more so than others. This leads to a definition of a tourism industry as one that would cease to exist without tourism, or would continue to exist only at a significantly reduced level of activity. By this definition, travel services is a tourism industry, while retail trade, which derives some of its business from visitors, is not. A tourism commodity is a good or service for which a significant part of its total demand comes from visitors. Air passenger transportation is a tourism commodity, while groceries, although occasionally bought by visitors, is not, because most groceries are bought by local residents.

Gross domestic product (GDP) can be defined as the unduplicated value of production of goods and services within the geographic boundaries of a country or region (e.g., province, territory).¹⁷ Tourism GDP is the GDP that can be attributed to the production of goods and services consumed directly by visitors.¹⁸ In the CTSA, tourism GDP is calculated as the sum of the labour income, mixed income (net income of unincorporated business) and other operating surplus (corporate profit and depreciation) that can be directly attributed to visitor spending.¹⁹

Several socio-demographic variables are available in the HRM. One of these, immigrant

¹⁶ The operational definition of tourism has been revised with the new, redesigned Travel Survey of Residents of Canada. Tourism will now include all overnight “out of town” trips and same-day trips exceeding forty kilometres one way from home. In addition to the usual exclusions, routine trips, such as for grocery shopping, will be excluded even if “out of town” or over forty kilometres.

¹⁷ Unduplicated means that values are not double counted. If, for example, the value of fuel used by aircraft is counted along with airfares (which already include the costs of fuel inputs) the value of the fuel would be counted twice. Instead, only the value added (the difference between revenues from sales of goods and services produced and the cost of intermediate inputs of goods and services) at each stage of production is counted in GDP. It should be noted that GDP in the CSNEA and CTSA is measured at basic prices. This means essentially that valuation is at the prices received by sellers, and does not include taxes on the sale of goods and services.

¹⁸ The qualifier “directly” is important. To continue the example from above, “directly” means that only the GDP generated in the production of passenger air transportation (which visitors consume in their travels) can be counted in tourism GDP, not any of the GDP or value added generated in the production of goods and services that are inputs to air transport (like the fuel which airlines use). It is in this sense that tourism GDP is directly attributable to visitor spending. There is, of course, GDP generated in the upstream production chain that can be attributed to tourism, but only indirectly. Estimates of the direct and indirect effects of tourism can be obtained from economic impact models.

¹⁹ In the CTSA, GDP is calculated using the sum of incomes generated by production approach, one of the three approaches to measuring GDP. The other two approaches are based on summing (1) the final expenditures on goods and services produced, and (2) the value added generated in the production of goods and services.

status, is defined as follows: an immigrant is a permanent resident who is not a Canadian citizen at birth or is a person who holds a study or work permit or who is a refugee claimant or is a family member living with a refugee claimant. A non-immigrant is a person who is a Canadian citizen at birth.

Appendix C: Data sources

There are four main sources of data underlying the Human Resource Module (HRM). They are the Canadian Productivity Accounts (CPA) data in the Canadian System of National Accounts (CSNA), the Census, the Labour Force Survey (LFS), and the Survey of Employment Payroll and Hours (SEPH). These are described below along with their main uses.

C.1 Canadian System of National Accounts

The CPA database in the CSNA provides the tourism industry group totals for employee jobs and hours worked, labour income, wages and salaries and supplementary labour income, for both full-time and part-time jobs. Comparable data are also available for self-employment jobs, but the income variable is the net income of unincorporated businesses. These totals are for all jobs, including those attributable to both tourism and non-tourism demand. The data are classified on a North American Industry Classification (NAICS) basis by province.

The CPA data for jobs are based, in turn, on the LFS estimates for the number of persons employed. This is adjusted to jobs by adding the second jobs of multiple-job holders.²⁰ Additions are made for employment not covered by the LFS (e.g., regular military, employed persons in the territories or living on Indian reserves, and civil servants working in Canadian embassies abroad) to reflect the total economy. Last, deductions are made to exclude those absent from work without pay during the reference week.²¹ SEPH is primarily used to develop the industry allocation of the adjusted LFS benchmarks, although industry surveys and administrative sources (for example T4 slips)²² are also used for selected industries.

The hours worked data include the following:

- hours actually worked during normal periods of work
- time worked in addition to hours worked during normal periods of work, and generally paid at higher rates than the normal rate (overtime)
- time spent at the place of work on work such as the preparation of the workplace, repairs and maintenance, preparation and cleaning of tools, and the preparation of receipts, time sheets and reports
- time spent at the place of work waiting or standing-by for such reasons as lack of supply of work, break-down of machinery, or accidents, or time spent at the place of work during which no work is done but for which payment is made under a guaranteed employment contract
- time corresponding to short periods of rest at the workplace, including tea and coffee breaks.

²⁰Industry of second job is determined based on patterns observed for multiple job holders in the Survey of Labour Income Dynamics.

²¹ For more details on the current CSNEA methodology see Jean Pierre Maynard, "Annual measure of the volume of work consistent with the SNA: The Canadian experience," paper presented to the annual meeting of the Paris Group, 29 September 2004, Lisbon, Portugal.

²² Forms used by the Canadian Revenue Agency for the employer to report the summary of remuneration paid to all employees who received salary, wages, tips or gratuities, bonuses, vacation pay, employment commissions and other remuneration.

They exclude:

- hours paid for but not actually worked, such as paid annual leave, paid public holidays, paid sick leave
- meal breaks
- time spent on travel to and from home and work.

The hours worked data are adjusted to correct for reference week effects in order to estimate annual hours worked.

In the CSNA, industry totals for wages and salaries come from a detailed reconciliation of wages and salaries from survey data and T4 administrative data. Estimates for components of supplementary labour income come in part from the T4 system (e.g., employer contributions to Employment Insurance (IE), Quebec Pension Plan and Canada Pension Plan (CPP), administrative data on registered pension plans and from Workers Compensation Boards, as well as other survey sources (for contributions like life, accident and health insurance).

It should be noted that adjustments for unreported tips are made to the benchmarks for several industries:

- Performing arts, spectator sports and related industries (NAICS 711)
- Amusement, gambling and recreation industries (NAICS 713)
- Accommodation services (NAICS 721)
- Food services and drinking places (NAICS 722).

The adjustments for tips are made on the basis of industry sales of alcoholic beverages, full service restaurant meals (no tips are assumed on fast food), and accommodation. There are additional, smaller imputations for the tips in personal care services (barbershops and beauty salons, etc.).

Average hourly earnings are calculated in the HRM as wages and salaries divided by total hours worked. Because tips and pay for absences (sick leave, vacations, etc.) are included in wages and salaries, the hourly earnings include an implicit premium on top of the straight wage for both.

C.2 Census of Population

The Census of Population provides comprehensive data on the demographic, social and economic characteristics of Canadians. Detailed information is collected from one in every five households. Given its large sample size, the Census serves as the most reliable source of information on occupational distributions. As such, data from the 2001 and 2006 Census are used primarily to distribute the CSNA totals for employee jobs, hours worked and wages and salaries across occupations by gender and age group, and between immigrants and non-immigrants.

The data used in these calculations are based on occupational distributions for persons who had employment income in the census reference years (in this case, 2000 and 2005). The self-employed are excluded in the calculations.

The samples are broken down into part-and full-time categories according to whether the weeks worked in the reference year were primarily full-time (30 or more hours per week) or part-time (less than 30 hours per week). Also, industry group and occupation relate to the main job held during the reference week (defined as the job at which the most hours were worked) or, if unemployed, to the main job held since the start of the reference year (defined as the one in which the most weeks were worked).

Tabulations for this study use the National Occupation Classification for Statistics (NOC-S 2006 and NAICS 2002 for the 2006 Census and NOC-S 2001 and NAICS 1997 for the 2001 Census. Differences between classification systems do not affect tourism industries and occupations.

C.3 Labour Force Survey

The Labour Force Survey (LFS) is conducted monthly and includes approximately 53,400 households, which translates roughly to a sample size of 100,000 people over the age of fifteen. The LFS collects basic labour force activity information including industry and occupation of employment for the survey reference week (normally the week including the 15th of the month), both for employees and the self-employed. It does not cover the territories, military personnel or civil servants stationed abroad, or persons residing on Indian reserves. Industry data are based on NAICS 2002, while occupation data use NOC-S 2001 for the entire period from 1997 to 2009.

The LFS is used here to develop the time series on jobs, hours worked and wages and salaries by occupation, age and gender for each industry group in the HRM. As mentioned previously, the LFS is used in the CSNA to establish overall number of jobs totals.

C.4 Survey of Employment, Payrolls and Hours

The Survey of Employment, Payrolls and Hours (SEPH) is conducted monthly. It collects the number of employee jobs and payroll data from a sample of establishments in Canada.

In this survey, establishments are coded by industry through the Business Register, thereby providing a reliable source of timely information on the industry distribution of employee jobs and payrolls. The administrative data are supplemented by the monthly Business Payroll Survey of 11,000 businesses. This survey collects data on employment, earnings and paid or usual hours, according to whether workers are paid by the hour, salaried or remunerated some other way.

SEPH data on a NAICS basis are available back to 1991. Data on the number of jobs, hours paid and earnings are used here to break down the CPA estimates so that they correspond to the definition of tourism industries used in the Canadian Tourism Satellite Account (CTSA). As mentioned earlier, SEPH is also used extensively in the CSNA to determine the industry distributions of employee jobs.

Appendix D: Methodology

The basic methodology consists of six steps:

1. taking totals from the Canadian System of National Accounts (CSNA) for jobs, hours worked, and wages and salaries
2. disaggregating these totals, using data from the CSNA for full-time and part-time jobs
3. distributing the CSNA totals for 2000 and 2005 across occupations, gender and age groups, and immigrant status based on census data
4. building time series from these benchmarks based on movements in corresponding series from the Labour Force Survey (LFS)
5. smoothing the time series for LFS occupations, while keeping the overall industry group totals
6. making limited, final adjustments to data values.

The following describes the methodology and implicit assumptions in more detail.

Step 1: Benchmark totals

The industry group totals for jobs, hours worked, labour income and wages and salaries, including the details by class of worker (employee or self-employed), by full- and part-time status, are from the Canadian Productivity Accounts (CPA) database.

These data do not exactly meet requirements, however, and a number of adjustments are needed. In particular:

1. The labour component of mixed income from self-employment is imputed by multiplying the hours worked in self-employment by the average hourly labour income per employee job. This method assumes that the self-employed and paid employees earn the same on average.²³ However, the imputation is imposed at the lowest level of the CPA database, resulting in differences in earnings between self-employed and paid employees in tourism industry aggregates.
2. The CPA jobs data follow the CSNA version of the North American Industry Classification (NAICS), which is simply a special aggregation that defines the working level (W level) industries of the Input-Output Tables. At this level, detail is available only for two parts of accommodation services, traveller accommodation (NAICS 7211) and RV parks, recreational campgrounds and rooming and boarding houses (NAICS 7212 + NAICS 7213 = 721A at the W level). An adjustment is required to remove rooming and boarding houses. This is done using details from the Survey of Employment Payroll and Hours (SEPH) on the industry's share of overall jobs, hours and earnings. These shares are used to adjust both employee and self-employment jobs. The same method is used to remove the non-tourism sub-industries of automotive equipment rental and leasing (NAICS 5321), food services and drinking places (NAICS 7220), performing arts, spectators and related industries (NAICS 7110) and amusement and recreation industries (NAICS 7131 + NAICS 7132 + NAICS 7139 = 713A at the W level).

²³ In past updates of HRM, this imputation included supplementary labour income (SLI). However, the self-employed do not contribute to the majority of plans/programs included in SLI. As a result, in this pilot study, SLI is excluded from labour income for the self-employed.

Step 2: Distribution of CSNEA data by full- and part-time status

Data from the CPA database in the CSNA are used to split jobs, hours worked and income by full-time and part-time status.

Step 3: Distribution of industry totals by occupation

Information on the occupational distribution of jobs comes from the Census. Step 3 involves using this source to distribute the CSNA totals by occupation, gender, age group and immigrant status.

This step relates only to employee jobs, as occupational details are not developed for the self-employed. The Census of Population is used to distribute the industry group totals established in the second step for the years 2000 and 2005 (i.e., the reference years for the 2001 and 2006 Censuses).

To develop occupational distributors for the industry group totals, special census tabulations are prepared, identifying persons in the tourism industries who had employment income in the reference year and were not self-employed. The selected persons are grouped according to their industry and whether they worked mainly full-or part-time during the reference year. For each of these groups the distribution of the (weighted) sample by occupation is determined, as well as the distribution of total hours worked and wage and salary income.

The occupational distributor for hours worked is based on the distribution of total hours (jobs multiplied by average hours worked) across occupations within each industry group.

The occupational distributor for wages and salaries is based on the distribution of total wages and salaries (jobs multiplied by hours worked multiplied by hourly earnings) across occupations in each industry group.

Step 4: Building the occupational time series

Step 4 entails using the corresponding LFS annual average series by occupation, age group and gender to build a time series. Information on immigrant status while available from the LFS was not considered robust enough at the detailed level, and therefore the percentage distribution from the census reference years (2000 and 2005) is used. To take into account the change in the immigrant ratio between the two censuses, a linear interpolation is used. The LFS data are adjusted to the census levels to maintain growth rates between the census years.

Step 5: Smoothing the LFS data

Step 5 entails smoothing (using a four-year moving average) to reduce volatility in the occupational time series found in the LFS. It is implemented in a way that preserves the overall industry group totals (from the CSNA) and the occupational distributions (from the 2001 and 2006 Census).

A simple moving average is applied to the indicators (discussed in Step 3) used to build the time series on jobs, hours worked and wages and salaries, full-and part-time, by occupation and for each industry. A four-year moving average was judged to provide the best results overall in terms of reasonableness and consistency, reduced volatility, and minimizing the need for manual adjustments.

Step 6: Other adjustments

The last step in developing the total industry estimates involves adjustments when the smoothed series appear out of line or generate erratic movements in the implied average annual hours or average hourly earnings. More specifically, adjustments are made if hourly earnings are more than four times higher than the corresponding occupation average or less than half of the Newfoundland and Labrador minimum wage or if hours reported are more than 70 hours a week. Results indicate that the smoothing and adjustments have little effect on the general pattern of the occupational distributions.

Appendix E: Tourism industries in the HRM

This study uses the North American Industry Classification System (NAICS) 2002 to define the tourism-related industries. Briefly, NAICS is a comprehensive industry classification system encompassing all economic activities. It is designed for the compilation of production statistics and, therefore, for the classification of data relating to establishments (and locations). The criteria used to group establishments into industries in NAICS are similarity of input structures, labour skills or production processes used.

In order to maintain the reliability of the data, several tourism industries have been grouped together. Thus the tourism industry groups of the HRM include:

1. Transportation
 - Air transportation
 - All other transportation (includes rail, water, bus, taxi and vehicle rental)
2. Accommodation
3. Food and beverage services
4. Recreation and entertainment
5. Travel services.

Following is detailed list of all tourism-related industries, including their NAICS codes.

Detailed list of tourism industries by North American Industry Classification System (NAICS) 2002

Transportation

Air transportation

4811 Scheduled air transportation

4812 Non-scheduled air transportation

All other transportation industries

4821 Rail transportation

of which:

Tourism sub-industries

482114 Passenger rail transportation

Non-tourism sub-industries

482112 Short-haul freight rail transportation

482113 Mainline freight rail transportation

4831 Deep sea, coastal and great lakes water transportation

4832 Inland water transportation

4851 Urban transit systems

4852 Interurban and rural bus transportation

4853 Taxi and limousine service

4854 School and employee bus transportation

4855 Charter bus industry

4859 Other transit and ground passenger transportation

4871 Scenic and sightseeing transportation, land

4872 Scenic and sightseeing transportation, water

4879 Scenic and sightseeing transportation, other

5A0510 Automotive equipment rental and leasing

of which:

Tourism sub-industries

532111 Passenger car rental

532120 Truck, utility trailer and RV (recreational vehicle) rental and leasing

Non-tourism sub-industries

532112 Passenger car leasing

Accommodation

7211 Traveller accommodation

721A²⁴ RV (recreational vehicle) parks and recreational camps

of which:

Tourism sub-industries

721211 RV (recreational vehicle) parks and campgrounds

721212 Hunting and fishing camps

²⁴ Special aggregation of NAICS industries in CSNA.

721213 Recreational (except hunting and fishing) and vacation camps
Non-tourism sub-industries
721310 Rooming and boarding houses

Food and beverage services

7220 Food services and drinking places
of which:
Tourism sub-industries
72211 Full-service restaurants
72221 Limited-service eating places
72241 Drinking places (alcoholic beverages)
Non-tourism sub-industries
72231 Food service contractors
72232 Caterers
72233 Mobile food services

Recreation and entertainment

51213 Motion picture and video exhibition
7110 Performing arts, spectator sports and related industries
of which:
Tourism sub-industries
7111 Performing arts companies
7112 Spectator sports
7115 Independent artists, writers and performers
Non-tourism sub-industries
7113 Promoters (presenters) of performing arts, sports and similar events
7114 Agents and managers for artists, athletes, entertainers and other public
figures

7121 Heritage institutions
713A²⁵ Amusement and recreation industries
7131 Amusement parks and arcades
7132 Gambling industries
7139 Other amusement and recreation industries
of which:
Tourism sub-industries
71391 Golf courses and country clubs
71392 Skiing facilities
71393 Marinas
71395 Bowling centres
71399 All other amusement and recreation industries
Non-tourism sub-industries
71394 Fitness and recreational sports centres

²⁵ Special aggregation of NAICS industries in the Canadian System of National Accounts (CSNA).

Travel services

5615 Travel arrangement and reservation services

Appendix F: Tourism occupations in the HRM

This study uses the National Occupational Classification for Statistics (NOC-S) definitions of occupations. An occupation is defined in this classification as a collection of jobs, sufficiently similar in work performed to be grouped under a common title for classification purposes.

The selection of occupations is based on an examination of the occupational data for 2001 Census for persons in the experienced labour force whose main job was in one of the tourism industry group.

Main occupation groupings included in the pilot are the same as those in the national HRM.²⁶ The selection was not changed for Newfoundland and Labrador in order to ensure comparability of results between provincial and national data. When looking at the data for occupations in Newfoundland and Labrador, the most prevalent occupations were included in the selection of main occupations used for the pilot.

²⁶ See the report “Human Resource Module of the Tourism Satellite Account, 2009”, *Income and Expenditure Accounts Technical Series*, Catalogue no 13-604, no 66, May 2010, Appendix F, for an explanation of how main occupations were selected.

Detailed list of tourism occupations by National Occupational Classification for Statistics (NOC-S) 2006

Occupations listed by tourism industry groups

NOC-S 2006

Accommodation

Accommodation service managers	A222
Program leaders and instructors in recreation, sport and fitness	F154
Chefs	G411
Cooks	G412
Bartenders.	G512
Food and beverage servers	G513
Hotel front desk clerks	G715
Light duty cleaners.	G931
Janitors, caretakers and building superintendents.	G933
Food counter attendants, kitchen helpers and related occupations	G961
All other accommodation occupations	

Transportation

Air transportation

Air pilots, flight engineers and flying instructors.	C171
Pursers and flight attendants	G712
Airline sales and service agents.	G713
Aircraft mechanics and aircraft inspectors.	H415
Air transport ramp attendants.	H737
All other air transportation occupations	

All other transportation

Transportation managers.	A373
Retail salespersons and sales clerks.	G211
Automotive service technicians, truck and bus mechanics and mechanical repairers.	H421
Bus drivers and subway operators and other transit operators	H712
Taxi and limousine drivers and chauffeurs.	H713
Railway and yard locomotives engineers	H721
Railway conductors and brakemen/women.	H722
All other transportation occupations	

Food and beverage services

Restaurant and food service managers. . . . .	.A221
Food service supervisors. . . . .	.G012
Cashiers. . . . .	.G311
Chefs . . . . .	.G411
Cooks. . . . .	.G412
Maîtres d’hôtel and hosts/hostesses . . . . .	.G511
Bartenders . . . . .	.G512
Food and beverage servers . . . . .	.G513
Bakers . . . . .	.G942
Food counter attendants, kitchen helpers and related occupations	G961
Delivery and courier service drivers. . . . .	.H714
All other food and beverage services occupations	

Recreation and entertainment

Recreation, sports and fitness program and service directors . . . . .	.A343
Technical occupations related to museums and art galleries	F112
Program leaders and instructors in recreation, sport and fitness.	F154
Retail salespersons and sales clerks. . . . .	.G211
Cashiers. . . . .	.G311
Security guards and related occupations. . . . .	.G631
Casino occupations. . . . .	.G723
Operators and attendants in amusement, recreation and sport. . . . .	.G731
Janitors, caretakers and building superintendents. . . . .	.G933
Food counter attendants, kitchen helpers and related occupations	G961
Landscaping and grounds maintenance labourers . . . . .	.I212
All other recreation and entertainment occupations	

Travel services

Retail trade managers . . . . .	.A211
Travel counsellors. . . . .	.G711
All other travel services occupations	

Appendix G: Table structure

The structure of the Human resource Module (HRM) tables is detailed below.

Tables are available on demand for each of the tourism industry groups (see Appendix C) included in the HRM, as well as a total for all industries.

Total employment, hours worked and wages and salaries are available for each industry group. Derived variables including average annual hours worked, average annual wage and salary and average hourly wages are also included.

These variables are split into the following categories:

- a. Full-time female
- b. Part-time female
- c. Full-time male
- d. Part-time male
- e. Total male
- f. Total female
- g. Total part-time
- h. Total full-time
- i. Total

Each of the above categories is split into occupational details (see Appendix F).

The categories “e” to “h” are further split into immigrants and non-immigrants, while the category “i” is further divided up into four age categories: (15-24, 25-34, 35-44, 45+).

It might be noted that for publication purposes, cells of the HRM tables are suppressed whenever the estimated number of jobs is less than twenty. Below this threshold, the data are considered confidential.

Tables on annual employment in tourism industries are now available upon request. Custom tabulations are also now available (\$). Tables on the annual employment directly attributable to tourism (i.e., tourism employment) and quarterly data are a work-in-progress. For more information, contact the information officer (613-951-3640; iead-info-dcrd@statcan.gc.ca), Income and Expenditure Accounts Division.

Glossary of terms

Basic prices: A basic price valuation including the costs of production factors (labour and capital) and indirect taxes and subsidies on production factors. It represents essentially the prices received by the sellers, and does not include taxes on the sales of goods and services.

Employee jobs: All jobs in which the person employed draws compensation for services rendered and for whom the employer must complete a Revenue Canada T4 form. Jobs in which workers are paid by tips or commissions are included. Self-employed proprietors of unincorporated enterprises and unpaid family workers are not included.

Full-time job: One in which a person usually works 30 hours or more per week.

Full-time equivalent employment: Is the number of full-time equivalent jobs.

Full-time equivalent (FTE) jobs: Is defined as total hours worked divided by average annual hours worked in full-time jobs. This can also be described as full-time-equivalent work-years. It is a less precise alternative to expressing labour input in terms of total hours worked.

Gross domestic product (GDP): The total unduplicated value of the goods and services produced in the economic territory of a country or region during a given period. GDP can be measured three ways: as total incomes earned in current production (income approach), as total final sales of current production (expenditure approach), or as total net values added in current production (value added approach). It can be valued either at basic prices or at market prices.

Hours worked: Actual hours worked during normal periods of work, including overtime but excluding paid leave (e.g., holidays, sick leave).

Immigrant: In this study, an immigrant is defined as a person who is a landed immigrant (or has been and has become a Canadian citizen) or a non-permanent resident. A landed immigrant is a permanent resident who is not a Canadian citizen at birth. A non-permanent resident is a person who holds a study or work permit or who is a refugee claimant or is a family member living with this refugee claimant.

Industry: An industry is a group of establishments engaged in the same or a similar kind of economic activity.

Job: A job is defined as an explicit or implicit contract between a person and an institutional unit to perform work in return for compensation for a defined period or until further notice. The institutional unit may be the proprietor of an unincorporated enterprise; in this case the person is described as being self-employed and earns a mixed income. The number of jobs exceeds the number of persons employed by the number of second, third, etc. jobs.

Jobs generated by tourism: Jobs that can be directly attributed to tourism demand.

Labour force: The civilian non-institutional population 15 years of age and over who are either employed or unemployed.

Labour income: Total earnings of employees, consisting of wages and salaries as well as supplementary labour income (such as employer's contributions to pension funds, employee welfare funds, the Employment Insurance Fund and Worker's Compensation Funds).

Main job: The job at which the most hours are worked.

Market prices: A valuation expressed in terms of the prices actually paid by the purchaser, that is, after all applicable taxes (including taxes on the sale of goods and services) and subsidies.

Mixed income: Mixed income is a balancing item in the industry accounts of the Input-Output accounts, representing the return to both self-employed labour and capital of the unincorporated business. Mixed income consists of earnings of proprietors of unincorporated businesses (sole proprietorships and partnerships) such as retailers and consultants, earnings of independent professional practitioners such as lawyers and dentists, net (after expenses) rental income of owners of real property and the accrued net farm income of farm operators.

Multiple-job holder: A person who is employed in more than one job during the reference period.

Non-immigrant: In this study, a non-immigrant is a person who is a Canadian citizen at birth.

Occupation: A collection of jobs, sufficiently similar in work performed (tasks, duties and responsibilities) to be grouped under a common title for classification purposes.

Part-time job: One in which a person usually works less than 30 hours per week.

Satellite account: An accounting system that follows the basic principles of the System of National Economic Accounts but also expands the analytical capacity for selected areas of economic or social concern, without overburdening or disrupting the central system. Satellite accounts are linked with the central framework of the national accounts and through them to the main body of integrated economic statistics.

Self-employment jobs: Includes working-owners of unincorporated enterprises, and members of their households who work without a wage or salary (i.e., unpaid family workers).

Supplementary labour income: Expenditures by employers on their labour account which are regarded as compensation of employees. It includes contributions to employment insurance, private and public pension plan contributions, and (beginning in 1990) retirement allowances.

System of National Economic Accounts (SNEA): The System of National Economic Accounts (SNEA) consists of a coherent, consistent and integrated set of macroeconomic accounts, balance sheets and tables based on a set of internationally agreed concepts, definitions, classifications and accounting rules. In its broad outline, the Canadian System of National Economic Accounts (CSNEA) bears a close relationship to the international standard as described in the United Nations publication: System of National Accounts 1993.

Total hours worked: The aggregate number of hours actually worked during the year in employee and self-employment jobs.

Tourism: The definition of tourism adapted from the World Tourism Organization and the United Nations Statistical Commission is: “the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes.”

Tourism commodity: Tourism commodity is one for which a significant part of its total demand in Canada comes from visitors.

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

Tourism employment: The number of jobs in tourism and non-tourism industries that can be directly attributed to tourism demand. Someone who works 10 hours a week counts for as much, by this measure, as someone who works 50 hours a week. This is also called “employment generated by tourism”.

Tourism industry: An industry which as a direct result of the absence of tourism would cease or continue to exist only at significantly reduced levels of activity. Some industries may be affected by the absence of tourism but not directly, for example the absence of tourism would greatly affect the air transportation industry and thus indirectly the catering industry.

Tourism Satellite Account: Tourism Satellite Account is an accounting framework, based on the System of National Economic Accounts that serves to define tourism and is used to compile and integrate statistics on tourism, to measure its importance to the economy, and to facilitate its comparison with other industries within the economy.

Visitors: Visitors are persons who undertake tourism as defined above. They are referred to as either tourists (those who stay overnight or longer in the place visited), or same-day visitors. In Canada, “tourist” is used to denote all visitors, whether they are same-day or overnight visitors.

Wages and salaries: Consists of monetary compensation and payments-in-kind (e.g., board and lodging), to wage earners and salaried persons employed in private, public and non-profit institutions in Canada including domestic servants and baby-sitters. Other forms of compensation included are commissions, bonuses, tips, directors' fees, taxable allowances, and the values of stock options of corporations. Bonuses, commissions and retroactive wages are recorded in the period paid rather than earned. Wages and salaries are recorded on a gross basis, before deductions for taxes, employees' contributions to employment insurance, and private and public pension plans.

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