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Human Resource Module of the Tourism Satellite Account: A Pilot Study for Ontario

Income and Expenditure Accounts Division
21st Floor, R.H. Coats Building, Ottawa, K1A 0T6



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Human Resource Module of the Tourism Satellite Account: A Pilot Study for Ontario

This paper reports on the Human Resource Module (HRM) of the Tourism Satellite Account: A pilot study for Ontario developed by Statistics Canada. This pilot study provides detailed information on employment related to tourism in Ontario. 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 provides a resource for training and planning for tourism in Ontario.

This study was prepared by Monique Bisailon of the Research and Development Projects and Analysis Section, Income and Expenditure Accounts Division, Statistics Canada. The study was funded through a partnership agreement with the Canadian Tourism Human Resource Council and the Ontario Ministry of Tourism.

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Symbols

The following standard symbols are used in Statistics Canada publications:

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

Highlights

- Ontario is the first province to test the Human Resource Module (HRM) at a regional level as a pilot study. The methodology used is very similar to the one used for the HRM at the national level because the same data sources are available at both the national and provincial level. The estimates required more editing and suppressions for confidentiality reasons than at the national level, but this did not compromise the quality of findings.
- 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 Ontario over a 12 year period, from 1997 to 2008.
- In 2008, the tourism sector in Ontario accounted for 606 thousand jobs or 8.9% of all jobs in Ontario. These jobs are the number of jobs in total in tourism industries.
- The food and beverage services industry group was the largest employer among tourism industries with 333 thousand jobs. The second largest employer was recreation and entertainment industries with 107 thousand jobs, followed by transportation with 83 thousand jobs. The accommodation industry group was responsible for 66 thousand jobs while travel services provided 18 thousand jobs.
- Similar to Canada, working hours were shorter in tourism industries in Ontario (29.5 hours per week) compared to jobs economy-wide (33.4 hours) in 2008. The shorter work week is explained partly by the higher proportion of part-time jobs in tourism.
- Hourly compensation was higher in tourism industries in Ontario compared to tourism industries nationally.
- The ten most prevalent occupational groups accounted for 62.7% of all employee jobs in tourism industries in Ontario. Nine out of ten jobs in the top five occupations of the tourism sector were in food and beverage services.
- Forty percent of jobs in tourism (219 thousand jobs) were held by teenagers or young adults in Ontario. Three out of four young adults worked in food and beverage services industries and almost seven out of ten worked part-time.
- Older workers, aged 45 years or more, were the second largest group of workers (150 thousand jobs) in tourism in Ontario. 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 almost twice as much as young adults.
- Immigrants were an important source of labour for tourism industries in Ontario holding 27.3% or 152 thousand jobs.
- Immigrants working in Ontario's tourism sector were older than other workers: about four out of ten immigrants were aged 45 years or more. Immigrants worked longer hours and earned lower wages.

1. Introduction

The aim of the Human Resource Module (HRM) is to provide timely and reliable statistics on the human resource dimension of tourism. Up until now, the HRM has always been at the national level. For the first time, with this report, the HRM will be providing detailed provincial statistics. Specifically, this study will help determine whether reliable provincial data can be provided in a timely manner. The first pilot study was conducted with Ontario, a province with a large population.

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.¹ 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 tourism, employment and training areas. Various tourism-affiliated agencies, academics, and decision-makers in tourism will also be able to use it for research and analysis, planning and development. 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 Ontario. 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.

Appendices 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 Economic Accounts (CSNEA). 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 jobs, hours worked 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 Economic Accounts (CSNEA) employment estimates for the overall economy and for selected industries as well as Canadian Tourism Satellite Accounts and National Tourism Indicators aggregates.

1. Some provincial information on the number of jobs generated by tourism was provided in "The Provincial and Territorial Satellite Accounts for Canada, 1998", *Income and Expenditure Accounts Technical Series*, catalogue no. 13-604, no. 40, Statistics Canada, Ottawa, June 2003.

The scope of this study is similar to the most recent national study² except the data refer to Ontario. The information on the number of jobs, hours worked and employment earnings is presented for the same industry groups³ including for full-time and part-time jobs. The information is also available according to the same characteristics of employees (gender, age group and immigrant status) and similar occupations.

In particular, the HRM for Ontario provides annual estimates for the years 1997 to 2008. 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 Ontario, 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 for the province. 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 Ontario⁵ in order to ensure comparability of results between provincial and national data.

The last step in developing estimates involves edits to series that appear out of line or generate erratic movements in the average annual hours or average hourly earnings. In particular, edits are made if hourly earnings are more than four times higher than the corresponding occupation average or less than half of the Ontario minimum wage or if hours reported are more than 70 hours a week.⁶ Results indicate that the edits still have little effect on the general pattern of the occupational distributions when applied to Ontario even though the data are slightly more volatile than at the national level. Approximately 2.8% of data cells were edited for Ontario (compared to 1.4% for Canada), affecting only 0.4% of jobs (compared to 0.1% for Canada).

When the estimates are final, cells in the HRM tables that are subject to publication 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. Results indicate that the number of cells with jobs below 20 is higher for Ontario (1.9%) than for Canada (0.7%) but very few jobs (0.4%) are affected. Suppression of cells at the detailed level does not alter estimates at a higher level.

It should be noted that data related to the air transportation industry in Ontario is not available for publication because of the high degree of concentration in this industry. Data for the travel services industry is also not available for publication from 1997 to 2002.

2. Bisailon, Monique and Charles Morissette, "Human Resource Module of the Tourism Satellite Account, 2007", *Income and Expenditure Accounts Technical Series*, Catalogue no.13-604 no. 61, Statistics Canada, Ottawa, May 2009.

3. For the Ontario pilot, details are not available separately for air transportation and other transportation industry groups. In addition, data is not available for the travel services industry from 1997 to 2002.

4. See "Labour statistics consistent with the System of National Accounts – 2005 to 2008 (revised)", Canadian Productivity Accounts, Income and Expenditure Accounts Division, Statistics Canada, *The Daily*, December 11, 2009. Data from the Canadian Productivity Accounts (CPA) are consistent with the Canadian System of National Economic Accounts (CSNEA).

5. All main occupations in Ontario are included in the selection of main occupations used for the pilot. However a few of the main occupations used have a lower ranking for Ontario. See Appendix F: Tourism occupations in the HRM for more details.

6. For details on exemptions to the Ontario minimum wage and to standards for hours of work see *Ontario Employment Standards Act, 2000* and regulations 285/01 (sections 4 and 7) and regulations 552/05 (section 2).

4. Results

The intent of this section is to highlight some of the findings and to illustrate some of the types of analyses a provincial HRM can support. The analysis focuses on the year 2008 and on comparisons between Ontario and Canada. A brief description of the general economic conditions prevailing in the tourism sector in 2008 is provided first. This description is used as background for the subsequent analyses in sections 4.1 to 4.4.

The year 2008 was characterized, at the national level, by slower growth in domestic tourism. Even though domestic visitors increased their spending by 4.1% in real terms compared to 2007, this was the smallest gain in four years. Slower growth in personal disposable income, poor weather (the summer of 2008 was the third wettest in 61 years), the high price of gasoline and fuel surcharges on airfares help explain the slowdown for the year.

Spending by international visitors in Canada fell 5.4% in real terms in 2008, bringing tourism exports to their lowest level in 13 years.

At the same time in Ontario, a comprehensive Ontario Tourism Competitiveness Study was launched. The government made the following comments in their overview of the study:⁷

- “Tourism in Ontario has been facing challenges both in the short and long term including: a strong Canadian dollar, a slowing U.S. economy, changing demographics and greater global competition.”
- “The new world of tourism is ripe for opportunity. But if Ontario is to improve its market share, we need to be smarter and more innovative in how we work.”

At the end of the study in February 2009, the Ontario government released the report entitled “Discovering Ontario: A report on the future of tourism”,⁸ which made four broad strategic proposals and 20 specific recommendations to revitalize and grow tourism in the province. One of the recommendations was to develop the tourism labour force: “Ontario should work to become an international leader in tourism training and education.”

4.1 Tourism sector

This section aims to compare key variables of the HRM: jobs, hours worked and compensation for the tourism sector in Ontario with the overall economy in Ontario and the tourism sector in Canada.

Compensation

Compensation⁹ reached \$17.9 billion in 2008 for tourism industries in Ontario, up 4.6% from the previous year, a higher growth than for the total economy in Ontario (see Table 1). This growth was mainly due to increases in hourly compensation (+2.8%) and to a lesser extent to the increases in the number of jobs (+1.0%) and the number of hours worked per job (+0.8%).

Since the severe acute respiratory syndrome (SARS) episode in 2003, tourism industries in Ontario have lost ground compared to tourism in the rest of Canada (Chart 1). In 2008, tourism industries accounted for 5.2% of total compensation in Ontario down from 5.8% in 2002.

7. “Competitiveness Study Overview”, Ontario Tourism Competitiveness Study, Ontario Ministry of Tourism website (<http://www.tourism.gov.on.ca>).

8. *Discovering Ontario – A report on the future of tourism*, prepared by The Ontario Tourism Competitive Study, Greg Sorbara, chair, February 2009.

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

Table 1 Total jobs, average weekly hours worked and average hourly compensation, tourism industries and total economy, Ontario, 2003 to 2008

	2003	2004	2005	2006	2007	2008	percent change 2007 to 2008
Compensation							
	millions of dollars						%
Total tourism industries Ontario	14,999	15,694	15,614	16,543	17,156	17,944	4.6
Total tourism industries Canada	38,378	40,094	40,353	43,081	46,845
Total economy Ontario	275,754	290,927	304,094	318,601	333,164	346,599	4.0
Number of jobs							
	thousands						%
Transportation	74	74	72	79	83	83	-0.3
Accommodation	70	68	71	70	66	66	-0.6
Food and beverage services	333	334	332	331	329	333	1.0
Recreation and entertainment	109	118	105	103	103	107	3.2
Travel services	19	19	20	19	18	18	0.1
Employee	553	564	555	558	553	558	0.9
Self-employed	52	48	45	44	47	48	1.2
Full-time	373	384	358	353	358	368	2.8
Part-time	232	228	242	249	242	238	-1.7
Total tourism industries Ontario	605	612	600	602	600	606	1.0
Total tourism industries Canada	1,588	1,594	1,564	1,596	1,650
Total economy Ontario	6,336	6,430	6,532	6,628	6,734	6,797	0.9
Average weekly hours worked per job							
	hours						%
Transportation	35.8	35.2	34.5	35.3	33.4	34.2	2.4
Accommodation	32.9	33.2	32.5	32.1	32.5	32.1	-1.2
Food and beverage services	28.0	28.9	28.2	28.3	27.3	27.7	1.4
Recreation and entertainment	29.1	29.3	29.0	29.0	29.1	28.9	-0.6
Travel services	34.1	35.9	35.5	35.0	34.7	34.2	-1.4
Employee	29.2	29.8	29.2	29.4	28.5	28.7	0.7
Self-employed	37.8	37.8	37.3	37.2	37.4	38.0	1.6
Full-time	39.0	39.3	39.2	40.0	38.8	38.7	-0.1
Part-time	15.3	15.6	16.0	15.9	15.1	15.1	-0.1
Total tourism industries Ontario	29.9	30.4	29.8	30.0	29.2	29.5	0.8
Total tourism industries Canada	30.0	30.2	29.6	29.8	29.8
Total economy Ontario	33.7	34.0	33.7	33.7	33.6	33.4	-0.6
Average hourly compensation per job¹							
	dollars						%
Transportation	27.72	29.02	29.05	28.28	29.58	28.22	-4.6
Accommodation	14.62	15.79	16.94	18.25	19.61	20.96	6.9
Food and beverage services	11.08	11.05	11.68	12.05	13.29	14.02	5.5
Recreation and entertainment	20.46	20.32	21.30	23.57	23.84	24.65	3.4
Travel services	19.85	20.50	20.81	21.87	22.99	25.36	10.4
Employee:	15.93	16.11	16.83	17.57	18.82	19.34	2.8
of which wages	14.15	14.17	14.75	15.45	16.72	17.31	3.5
Self-employed	15.88	16.99	16.30	18.01	18.61	19.21	3.2
Full-time	17.02	17.26	17.69	18.51	19.78	20.41	3.2
Part-time	11.42	11.70	13.46	14.40	15.11	15.05	-0.4
Total tourism industries Ontario	15.92	16.20	16.78	17.61	18.80	19.33	2.8
Total tourism industries Canada	15.51	16.04	16.79	17.44	18.33
Total economy Ontario	24.86	25.58	26.57	27.46	28.35	29.39	3.7

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

Jobs

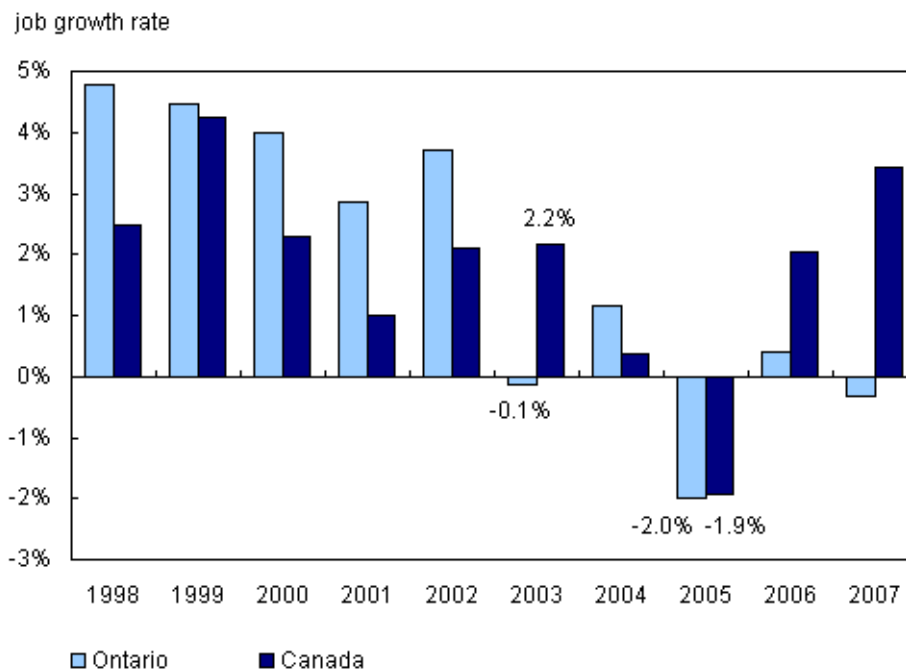
According to the HRM, tourism industries in Ontario generated a total of 606 thousand jobs in 2008. This includes both full-time and part-time jobs, as well as employee jobs and jobs from self-employment. The tourism sector accounted for 8.9% of all jobs in Ontario in 2008. In 2002, prior to SARS, it accounted for 9.8% of all jobs in Ontario.

It should be noted that 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 606 thousand jobs can be attributed to visitors. This portion has not been calculated in this study but was estimated at 29.6% for Ontario in 1998.¹⁰ Furthermore, the number of jobs provided by the HRM does not include jobs generated indirectly from supporting inputs to the production of tourism commodities.

In 2003, SARS hit tourism industries in Ontario while the rest of the country was barely affected. Jobs in tourism industries in Ontario declined by 0.1% while they were up 2.2% in Canada. The losses in Ontario were concentrated in the food and beverage services industries.

Chart 1

Annual rate of job growth in tourism industries, Ontario and Canada, 1998 to 2007



10. In Appendix I of "The Provincial and Territorial Tourism Satellite Account for Canada, 1998", it was calculated that in 1998, 155 thousand jobs were created in tourism industries in Ontario, directly from visitors spending. However, according to the Ontario pilot, in 1998, a total of 523 thousand jobs were created in tourism industries in Ontario, when taking into account both visitor and local resident spending.

In 2005, tourism in both Ontario and Canada experienced important declines in jobs, -2.0% and -1.9%, respectively. Jobs were cut back mainly in recreation and entertainment industries and in transportation industries. These declines were partly attributable to the National Hockey League lockout and the departure of the Montreal Expos as well as a spike in energy prices that came with Hurricane Katrina. Restructuring in the airline industry was also partly responsible. As a result of the restructuring, some support activities, for example maintenance, were shifted from tourism to non-tourism industries.

In Ontario, the number of jobs in tourism grew by 1.0% in 2008, similar to the 0.9% growth registered for all jobs in the province. More full-time jobs (+10 thousand) were created than the number of part-time jobs lost (-4 thousand).

Part-time jobs were twice as prevalent in Ontario's tourism industries (39.3%) compared to all industries in the province (20.3%). Similar to Canada, four out of ten jobs in the tourism sector were part-time. However self-employment was somewhat more common, accounting for 7.9% of tourism jobs in Ontario compared to 6.9% Canada-wide.

Hours

In 2008, a total of 0.9 billion hours were worked in tourism industries, accounting for 7.9% of the 11.8 billion hours worked economy-wide in Ontario. This implies an average work week of 29.5 hours in tourism in the province, up 0.8% from the year before, but somewhat less than the 33.4 hour work week in the total economy. The shorter week reflects the higher proportion of part-time jobs found in tourism industries and the lower proportion of self-employed as compared to the economy overall. Self-employed work on average longer hours (38.0 hours) than employees (28.7 hours) but are less commonly found in the tourism sector than in the rest of the economy.

The hourly compensation in tourism in Ontario was \$19.33 per hour in 2008, up 2.8% from \$18.80 the year before¹¹ but still much lower than the hourly compensation province-wide of \$29.39. However, over the period 1997 to 2008, hourly compensation for tourism in the province has always been higher or equal to the national average for tourism industries.

4.2 Tourism industries 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 intended to give an indication of the kinds of industry analyses possible with the HRM.

Food and beverage services

Among the tourism industry groups, food and beverage services was the largest employer in 2008. With 333 thousand jobs, accounting for 54.9% of all jobs in tourism industries in Ontario (Chart 2). This was a higher proportion than tourism industries Canada-wide (53.4% in 2007). With more than six thousand full-time jobs created and three thousand part-time jobs lost, the food and beverage services industry group registered a gain of more than three thousand jobs (+1.0%) in 2008.

This industry group held the highest share of part-time jobs (45.5%) among tourism industries in Ontario. Not surprisingly the work week in this industry, at 27.7 hours, was the shortest among all tourism industries in Ontario and was well below the average work week of 33.4 hours for all jobs in Ontario.

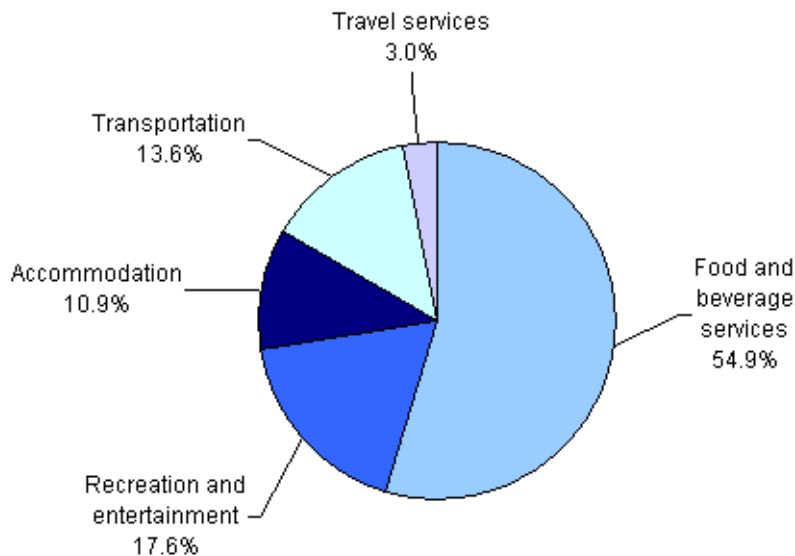
11. The general minimum wage in Ontario increased in 2008 to \$8.75 per hour from \$8.00 per hour in 2007. This increase contributed to the growth of 3.1% in the hourly compensation in tourism industries.

Jobs in food and beverage services continued to pay the least of all tourism industries, with an average hourly compensation of \$14.02 in 2008. Even though this was up (+5.5%) from the year before and above the Canadian average for food and beverage services by about \$0.50, it remained well below the average of \$19.33 for tourism industries in Ontario.¹²

The hourly wage for all jobs in food and beverage services was \$12.88 in 2008. This is less than the hourly compensation (\$14.02) which includes supplementary labour income (employer contributions on behalf of employees to employment insurance, private and public sector pension plans, Canada and Quebec pension plans, worker' compensation, health and life insurance plans, and retirement allowances).

There was considerable variation in hourly wages by occupation within this industry group. Restaurant and food service managers earned the most, \$16.14 per hour, while cashiers earned the least, \$10.38. The most common occupation group in food and beverage services was food counter attendants and kitchen helpers, which accounted for 26.6% of employee jobs in this industry. They were paid \$10.72 per hour.

Chart 2
Distribution of jobs in tourism industries in Ontario, 2008



Recreation and entertainment

The recreation and entertainment industry group was the second largest employer among the groups included in the HRM, accounting for about one in five jobs (or 107 thousand jobs) in 2008. This industry posted the strongest growth (+3.2%) in 2008 among all tourism industries in Ontario with the creation of both full-time jobs (+2 thousand jobs) and part-time jobs (+1 thousand jobs).

12. Gratuities are included in these figures. To understand how gratuities are calculated, see Appendix C: Data sources.

The presence of a large proportion (42.0%) of part-time jobs in recreation and entertainment contributed to a short work week. Averaging 28.9 hours, it was among the shortest in tourism industries. Hourly compensation in this industry (\$24.65) was above the tourism sector average for Ontario (\$19.33) but remained below hourly compensation province-wide (\$29.39). Program leaders and instructors in recreation, sports and fitness were the most common occupation group.

Transportation

In 2008, 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 83 thousand jobs, or 13.6% of all jobs in tourism in Ontario.

Transportation industries posted a small decline of 0.3% in jobs compared to 2007. Many part-time jobs were lost but full-time jobs were also created. This industry supported 12 thousand jobs from self-employment, accounting for 24.5% of all self-employment jobs in tourism.

Jobs in transportation came with a long work week, on average 34.2 hours, almost 5 hours more than hours worked on average for other tourism jobs in Ontario. One reason for the longer hours is the high proportion of full-time jobs (73.0%). Another reason is the long hours (44.8 hours per week) worked by the relatively high proportion (14.5%) of self-employed in these industries. The proportion of self-employed in this industry is almost double the sector average.

In addition to a long work week, jobs in transportation are paid more than in other tourism industries, with an hourly compensation of \$28.22, almost \$9.00 per hour more than the hourly compensation across all tourism jobs in Ontario. It was also almost equal to the hourly compensation across all industries in the province.

The most common occupation group in transportation was bus drivers and subway and other transit operators, accounting for 26.9% of employee jobs in the industry. They were paid an hourly wage of \$22.63 in 2008.

Given that transportation comprises a mix of several industries, including air, bus, rail, water, taxi and vehicle rental, it is not surprising to observe a wide range of wages. Taxi and limousine drivers and chauffeurs, the second most prevalent occupation group in transportation, were paid an hourly wage of \$10.50, while railway and yard locomotive engineers earned \$37.77.

Accommodation

Accounting for 66 thousand jobs in 2008, accommodation was the fourth largest employer among the tourism industry groups in Ontario. Prior to the year 2000, this industry represented the third largest tourism employer. At the national level, the accommodation industry group has remained the third largest employer in the sector over the entire 1997 to 2007 period.

In 2008, the number of jobs in accommodation industries declined by 0.6% in Ontario; jobs lost were all full-time jobs which partially explains the shorter work week in 2008. Hours worked per week in accommodation fell to 32.1 hours in 2008, from 32.5 in 2007.

For this industry group, hourly compensation, which includes gratuities and supplementary labour income, was up 6.9% in 2008, reaching \$20.96, more than the provincial sector's average of \$19.33. On average, individuals working in accommodation in Ontario were paid more than those working in this industry in the rest of Canada.

In 2008, light-duty cleaners were the most prevalent occupation in this industry, with about 13 thousand employee jobs, most of them held by women (92.7%).

Travel services

Travel services was the smallest tourism industry group with 18 thousand jobs in 2008, up 0.1%, following two years of decline in 2006 and 2007. This industry group accounted for only 3.0% of all jobs in tourism in the province.

Hourly compensation in this industry group was above the tourism sector average in Ontario (\$25.36 per hour versus \$19.33), as were the hours worked (34.2 hours per week versus 29.5). Travel services had the highest proportion of full-time jobs in the tourism sector in 2008, at 89.6%.

Travel counsellors were the predominant occupation in the travel services industry group, accounting for 56.7% of the industry's employee jobs. Retail trade managers were the second largest occupation group representing 11.3% of employee jobs in travel services.

4.3 Occupations in tourism industries

Ten main occupation groups accounted for 62.7% of all employee jobs in tourism industries in Ontario (Chart 3). Similar to Canada, three occupation groups were dominant: food-counter attendants and kitchen helpers; food and beverage servers; and cooks. Out of the ten main occupational groups two groups were more common in Ontario than in the rest of Canada: bus drivers and subway operators and other transit operators; and chefs.

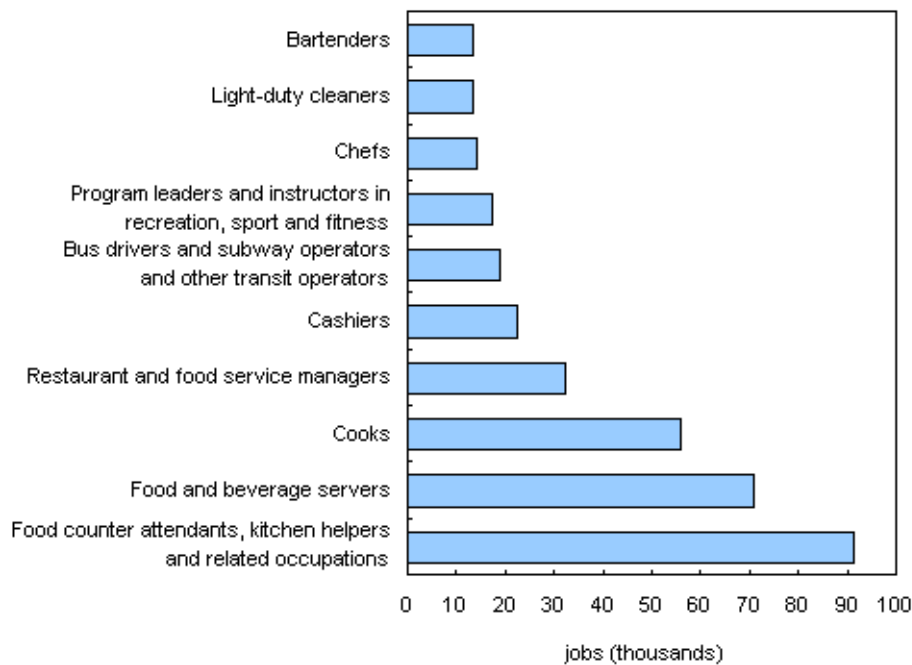
Furthermore, dominant occupations in the tourism sector were concentrated mainly in one tourism industry group. Ninety four percent of the jobs in the five top occupations (food-counter attendants and kitchen helpers, food and beverage servers, cooks, food and beverage managers and cashiers) were in the food and beverage services industries (see Chart 3). Less than five percent of the jobs in the five main occupations were in the accommodation industries and about two percent of the jobs were in recreation and entertainment. There were no jobs in these occupations in transportation industries and travel services.

In 2008, three out of the ten main occupation groups were paid above the average annual salary for the tourism sector in Ontario of \$25,848. Restaurant managers were paid \$39,088 per year; bus drivers earned \$36,264; and chefs received \$30,517.

Bus drivers were the only workers (of the ten main occupation groups) who earned an hourly wage (\$22.63) above the tourism average of \$17.31. Program leaders (\$16.30) and light duty cleaners (\$14.99) were paid higher wages per hour than chefs (\$14.00), but earned less per year because they worked fewer hours per week.

Restaurant managers (46.6 hours), chefs (41.9 hours), bus drivers (30.8 hours) and light duty cleaners (29.5 hours) worked longer hours per week than the tourism sector average of 28.7 hours for employee jobs.

Chart 3
Main occupations in tourism industries, Ontario, 2008



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 HRM results according to these demographics (see Table 2).

Gender

Similar to tourism industries Canada-wide, women in Ontario were over-represented in the tourism sector in 2008 accounting for 55.8% of jobs in the tourism sector. Also, women held a total of 312 thousand employee jobs, 65 thousand more than men. A higher proportion of women working in tourism industries were less than 25 years of age (41.0%), compared to men (36.8%).

In Ontario, women were employed more evenly across tourism industries than in Canada's tourism sector overall. Women were under-represented in Ontario in only one industry group, transportation. Just 36.6% of the employee jobs in this industry were held by women.

In all tourism industries in Ontario, women had shorter work weeks than their male counterparts. This was especially the case for transportation industries (26.6 hours per week for women, compared to 35.8 hours for men). Women were also more likely than men to be in part-time jobs.

In 2008, women working in tourism industries in Ontario earned \$4.11 less than men (\$15.31 per hour versus \$19.42). This is comparable to tourism industries elsewhere in Canada. There was a noteworthy variation in women's wages, with jobs in transportation (\$23.32) and travel services (\$23.42) paying the most, and jobs in food and beverage services paying the least (\$12.06).

Table 2 Employee jobs, hours and wages by employee characteristics for tourism industries, Ontario, 2008

	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	thousands								
Transportation	71	26	45	5	13	15	37	20	50
Accommodation	62	37	26	18	11	11	21	20	42
Food and beverage services	321	193	127	159	57	45	59	91	230
Recreation and entertainment	87	43	44	34	15	13	25	15	72
Travel services	17	13	5	2	4	4	7	7	11
Full-time	339	176	162	74	75	72	117	109	229
Part-time	220	135	84	145	25	16	33	43	177
Total tourism industries	558	312	247	219	100	89	150	152	406
Average weekly hours worked per job	hours								
Transportation	32.4	26.6	35.8	22.9	27.7	38.3	33.0	35.2	31.3
Accommodation	31.4	29.9	33.7	16.8	35.0	39.9	37.7	37.9	28.4
Food and beverage services	26.9	25.1	29.7	18.3	33.0	36.3	37.1	32.3	24.8
Recreation and entertainment	29.2	27.4	30.9	15.5	37.3	42.1	36.1	31.4	28.7
Travel services	34.4	33.0	38.2	21.0	33.7	36.5	36.8	36.5	33.1
Full-time	37.5	34.9	40.4	26.6	38.5	41.9	40.9	40.0	36.3
Part-time	15.2	15.4	14.8	13.4	17.1	20.5	18.6	16.9	14.8
Total tourism industries	28.7	26.4	31.6	17.9	33.2	38.0	36.0	33.5	26.9
Average hourly wages per job	dollars								
Transportation	26.25	23.32	27.48	15.11	22.78	28.06	27.50	24.00	27.25
Accommodation	18.90	16.69	21.75	12.66	17.52	19.37	21.75	21.82	17.07
Food and beverage services	12.88	12.06	13.92	10.36	13.06	14.33	14.98	12.47	13.08
Recreation and entertainment	21.44	19.85	22.83	13.60	20.24	24.02	25.13	22.18	21.28
Travel services	24.26	23.42	26.29	13.65	19.84	26.67	26.51	22.54	25.45
Full-time	18.35	16.08	20.48	11.35	16.35	19.90	21.46	17.26	18.93
Part-time	13.34	13.03	13.85	10.97	14.42	16.27	18.42	14.31	13.06
Total tourism industries	17.31	15.31	19.42	11.16	16.10	19.54	21.11	16.84	17.53

Youth and older workers

Youth aged 15 to 24 years were a major source of labour for the tourism industries in Ontario. They held 219 thousand employee jobs in 2008, accounting for four out of ten employee jobs in tourism. Three out of four young workers were concentrated in the food and beverage services industries.

Older workers aged 45 years or older were also an important source of labour for tourism (26.9%), contributing 150 thousand employee jobs. Furthermore, older workers were employed more evenly across tourism industry groups than young adults.

Almost seven out of ten young workers were likely to be working in part-time jobs in tourism compared to about one out of five older workers. Young adults and teenagers worked fewer hours per week (17.9 hours) relative to older workers (36.0 hours). This was especially the case in the accommodation industries. According to another study done by Statistics Canada,¹³ about 90% of young workers gave attending school as main reason to be working part-time.

Wages of young workers were also considerably lower. The hourly wage among workers in tourism industries aged 15 to 24 was \$11.16 in 2008, almost half the wages for employees aged 45 and over in tourism industries (\$21.11). The wage differential between the young and old was the most pronounced in the transportation and travel services industry groups.

Immigrants

Immigrants are an important source of labour for the tourism sector in Ontario, even more so than elsewhere in Canada. In 2008, immigrants held 152 thousand jobs, accounting for 27.3% of tourism employee jobs in Ontario.

Immigrants in tourism industries were older than other tourism workers. About four out of ten immigrants were 45 years or older while almost half of non-immigrants were teenagers or young adults. The majority of non-immigrants in tourism in Ontario were women, while there was an equal split between women and men among immigrants.

Compared to non-immigrants, immigrants were more likely to work full-time. Immigrants worked longer hours than their non-immigrant counterparts, 33.5 hours per week versus 26.9 in 2008.

Immigrants earned lower wages per hour than non-immigrants, almost 70 ¢ less per hour but the wage difference was smaller in Ontario than for tourism in the rest of Canada. In transportation industries in Ontario, wages were notably lower for immigrants (\$24.00) than for other workers (\$27.25). However, immigrants were paid more than non-immigrants in accommodation industries in all occupation groups except for program leaders and instructors in recreation, sport and fitness; and janitors, caretakers and building superintendents.

13. "Part-time by choice", Katherine Marshall, *Perspectives on Labour and Income*, Statistics Canada, Catalogue no. 75-001, November 2000.

5. Conclusion and future work

The feasibility of extending the HRM to a regional dimension has been explored and has been successful for Ontario. While a small increase in volatility and in suppressions was experienced with the data for Ontario, it did not compromise the quality of the findings. However, details for the air and transportation industry group were lost.

Another pilot is planned with a province of smaller population, to explore the limits of the data and methodology used for the HRM, in particular to see if there would be a problematic increase in volatility. As well a pilot with a smaller province will require a more detailed look at the suitability of the selection process for main occupations.

In addition, we plan to improve the methodology used by the HRM by implementing the following two changes starting with the national level:

- Labour income information from self-employment is not available and must be imputed from mixed income. In the HRM, labour income is obtained by multiplying hours worked in self-employment by employee hourly labour income (wages plus supplementary labour income). This method assumes that the self-employed and paid employees earn the same on average. The inclusion of Supplementary Labour Income (SLI) as part of labour income for self-employed is planned to be reviewed in the future.¹⁴
- Currently, the HRM provides information on the total number of jobs due to the production of commodities in tourism industries whether the commodities are consumed by visitors or by local residents. However, this information does not separately identify the number of jobs due to the production for visitor's consumption from the production for local consumption. Work is currently underway to develop these estimates separately at the national level.

14. The SLI has been included so that the earnings in the pilot are comparable with earnings for Canada in the HRM, 2007. See *Ontario Employment Standards Act, 2000* and regulations 285/01 (sections 4 and 7) and 552/05 (section 2).

Appendix A: Accounting framework

The 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).¹⁵ In turn, the TSA: RMF is based on the accounting framework and principles of the internationally recognized System of National Accounts 1993 (SNA).¹⁶

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 CSNEA, 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.¹⁷

15. Commission of the European Communities, 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.

16. Commission of the European Communities, 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.

17. 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 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 CSNEA 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,¹⁸ 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.¹⁹ Mixed income is the income after expenses of unincorporated business accruing to the self-employed.²⁰

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 CTSA/NTI. Thus, tourism employment in an industry 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 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 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 travels 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

18. The imputation of unreported tips in the CSNEA is described in Appendix C.1.

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

20. 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.

the area less than 80 kilometres one-way from home.²¹ 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. On the other hand, crossing an international boundary is considered tourism regardless of the distance travelled.

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).²² Tourism GDP is the GDP that can be attributed to the production of goods and services consumed directly by visitors.²³ 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.²⁴

Several socio-demographic variables are available in the HRM. One of these, immigrant status, is defined as follows: an immigrant is a permanent resident who was 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.

21. 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.

22. 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.

23. 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 indirect effects of tourism can be obtained from economic impact models.

24. 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.

Appendix C: Data sources

There are four main sources of data underlying the Human Resource Module pilot study estimates for Ontario. They are the Canadian Productivity Accounts (CPA) data in the Canadian System of National Economic Accounts (CSNEA), 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 Economic Accounts

The CPA database in the CSNEA 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 NAICS basis by province.

The CPA data for jobs are based, in turn, on the Labour Force Survey estimates for the number of persons employed. This is adjusted to jobs by adding the second jobs of multiple-job holders.²⁵ 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.²⁶ SEPH is primarily used to develop the industry allocation of the adjusted LFS benchmarks, although industry surveys and administrative sources 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, breakdown 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.

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.

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

26. 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.

In the CSNEA, 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 EI and Q/PPP), 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 and spectator sports and related industries (NAICS 711)
- Amusement, gambling and recreation industries (713)
- Accommodation services (721)
- Food services and drinking places (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.) and railway transportation (for luggage porters) industries.

It should be noted that the 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 CSNEA totals for Ontario 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 NOC-S 2006 classification for occupations and NAICS 2002 classification for industries on the 2006 Census and NOC-S 2001 and NAICS 1997 on 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 2008.

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 CSNEA 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 CTSA. As mentioned earlier, SEPH is also used extensively in the CSNEA to determine the industry distributions of employee jobs.

Appendix D: Methodology

The basic methodology consists of six steps:

1. taking totals from the CSNEA for jobs, hours worked, and wages and salaries in Ontario
2. disaggregating these totals, using data from the CSNEA for full-time and part-time jobs
3. distributing the CSNEA 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 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 Production Account (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.²⁷ 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 CSNEA jobs data follow the CSNEA version of 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 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 rail transportation (NAICS 4821), 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+ NAICS7132 + NAICS 7139 = 713A at the W level).

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

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

27. This imputation includes supplementary labour income (SLI). The self-employed do not contribute to the majority of plans/programs included in SLI. The inclusion of SLI as part of labour income for self-employed will be reviewed in the next update.

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 CSNEA 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 CSNEA) 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 Ontario minimum wage or if hours reported are more than 70 hours a week.²⁸ Results indicate that the smoothing and adjustments have little effect on the general pattern of the occupational distributions.

28. For details on Ontario minimum wage and standards for hours of work, see *Ontario Employment Standards Act, 2000* and regulations 285/01 (sections 4 and 7) and 552/05 (section 2).

Appendix E: Tourism industries in the Human Resource Module

Summary tourism industries

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:

Transportation²⁹

Air transportation

All other transportation (includes rail, water, bus, taxi and vehicle rental)

Accommodation

Food and beverage services

Recreation and entertainment

Travel services.

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

29. Note that for the Ontario HRM, details on air transportation and other transportation are suppressed.

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

Transportation

Air transportation

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

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
- 5A0510¹ 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
- 721A¹ RV (recreational vehicle) parks and recreational camps
of which:
 - Tourism sub-industries**
 - 721211 RV (recreational vehicle) parks and campgrounds
 - 721212 Hunting and fishing camps
 - 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
713A ¹	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

Travel services

5615	Travel arrangement and reservation services
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1. Special aggregation of NAICS industries in CSNEA.

Appendix F: Tourism occupations in the Human Resource Module

Summary occupational classification

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

Main occupation groupings included in the pilot are the same as those in the national HRM.³⁰ The selection was not changed for Ontario, in order to ensure comparability of results between provincial and national data. When looking at the data for occupations in Ontario, the most prevalent occupations were included in the selection of main occupations used for the pilot. However, a few of the main occupations used (identified in the following list) while being important in Ontario, obtained a lower ranking in Ontario than at the national level. A detailed listing of occupations along with their NOC-S codes follows.

30. See the report "Human Resource Module of the Tourism Satellite Account, 2007", *Income and Expenditure Accounts Technical Series*, catalogue no. 13-604, no. 61, May 2009, Section 4.2, 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 ¹	G411
Cooks ¹	G412
Bartenders ¹	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 transportation

Transportation managers ¹	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 ¹	H721
Railway conductors and brakemen/women ¹	H722

All other air transportation and other transportation occupations

Food and beverage services

Restaurant and food service managers	A221
Food service supervisors	G012
Cashiers	G311
Chefs	G411
Cooks	G412
Maitres 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 ¹	H714
All other food and beverage services occupations	

Occupations listed by tourism industry groupsNOC-S 2006**Recreation and entertainment**

Recreation, sports and fitness program and service directors ¹	A343
Technical occupations related to museums and art galleries ¹	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	

1. Main occupations that obtained a lower ranking in Ontario than at the national level.

Appendix G: Table structure

The structure of the HRM tables is detailed below.

Tables are available for each of the five 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 are 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 to 24, 25 to 34, 35 to 44, and over 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. 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 plans, worker's compensation, health and life insurance plans, and 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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