



Catalogue no. 13-604-MIE — N° 051
ISSN: 1707-1739
ISBN: 0-662-42865-X

Research Paper

Income and Expenditure Accounts Technical Series

Human Resource Module of the Tourism Satellite Account, 1997-2002

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Human Resource Module of the Tourism Satellite Account, 1997-2002

This paper highlights the new Human Resource Module (HRM) of the Tourism Satellite Account developed by Statistics Canada. The HRM provides detailed information on employment related to tourism for the years 1997 to 2002. Information on wages and salaries, number of jobs and hours worked by occupation are included. Occupational data is further disaggregated by age, gender and immigration status. Seasonal patterns within tourism employment are also analyzed. This study provides a resource for training and planning for tourism.

Ottawa
March 2006

Catalogue no. 13-604-**MIE** no. 51
ISSN: 1707-1739
ISBN: 0-662-42865-X

Catalogue no. 13-604-**MPB** no. 51
ISSN: 1707-1720
ISBN: 0-662-49012-6

Published by authority of the Minister responsible for Statistics Canada

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The Tourism Human Resource Module, 1997 - 2002¹

Executive summary

- This study provides over 1000 tables of employment data in a Human Resource Module (HRM) to the Tourism Satellite Account (TSA). This detailed information is useful for tourism analysts and employment and training planners.
- Since the HRM is based on the same concepts as the TSA and the National Tourism Indicators (NTI), direct comparisons can be made with the data in these accounts.
- The study covers the years 1997 to 2002. It expands on an earlier feasibility study by including information on age, gender and immigration status by occupation within each tourism industry.
- Detailed information for all tourism industries, in this case aggregated into five industries, are available. These industries include transportation, accommodation, food and beverage services, recreation and travel services. The transportation industry can be further split into the air transportation industry and all other industries.
- One of the strengths of the HRM is that it can convey information from two different perspectives, the total industry approach and the TSA approach. For example, the accommodation industry provided a total of 239 thousand jobs to the Canadian economy in 2002. Of these, 160 thousand, or two-thirds, are attributable to tourism.
- By 2002, over 1.6 million jobs were held in the six tourism related industries studied in this report. This was up from 1.4 million in 1997, a 15% increase. Of these jobs, 490 thousand, or 30%, were directly attributable to tourism activity.
- Twenty percent of workers in tourism related industries were born outside of Canada.
- Tourism workers tended to be quite young. Nearly 39% of workers were 15-24 years old.
- Jobs attributable to tourism earned about 8% more dollars per hour than the total industry jobs. Tourism jobs also were more likely to be full-time and attracted fewer young people than total industry jobs.
- Tourism industries vary considerably in their employment characteristics. For example, the air transportation industry was the highest paying industry; with workers earning twice the average of other industries, the food and beverage industry was the largest employer but also the lowest paying industry. Nearly all of the jobs in the travel services industry are attributable to tourism.
- Tourism labour productivity has generally increased for tourism industries from 1997 to 2002. Air transportation and food and beverage services were exceptions.
- Seasonal patterns in the tourism industries have become less pronounced over the 1997 to 2002 time period. The third quarter has the most tourism activity and the most employment. The first quarter has the lowest employment.
- Accommodation has the greatest level of seasonal variation of all tourism industries. Air transportation and travel services differ from other tourism industries in that the fourth quarter for these two industries, registered the highest level of employment.

1. This study was prepared by staff of the Research and Development Projects and Analysis Section, Income and Expenditure Accounts Division, Statistics Canada. The study was made possible by joint funding by the Canadian Tourism Commission, the Canadian Tourism Human Resource Council, Human Resources and Skills Development Canada, and Statistics Canada.

1. Introduction

The aim of the Human Resource Module (HRM) is to provide timely and reliable statistics on the human resource dimension of tourism. Both the Tourism Satellite Account (TSA) and the National Tourism Indicators (NTI) already carry some limited information on the number of jobs generated by tourism, while the former carries information on the labour income associated with these jobs as well. The HRM expands this information considerably.

The HRM complements and enhances the analytical capacity provided by the TSA and the NTI, allowing for a broader insight into tourism's role in the economy. It also 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.

Human resource planning involves all persons working in tourism, irrespective of whether their income comes directly from serving a tourist or a non-tourist. Consequently, the total number of jobs in tourism industries is a major focus of the HRM. This is broader than the TSA and the NTI, which portray only the jobs generated by tourism demand.

It should be emphasized that, for consistency with the System of National Accounts (SNA), the HRM uses the number of jobs as its key measure of employment. This is not the same as the Labour Force Survey (LFS) measure of employment, which is the number of people employed. The two differ because of multiple job-holders, thus the former exceeds the latter by the number of people with second, third, etc., jobs.

This study expands on the feasibility study completed in 2005 which examined the possibility of developing a Human Resource Module (HRM) of the Tourism Satellite Account (TSA)². The feasibility study included only the air transportation and accommodation industries, while this study includes all tourism industries. More detailed information has also been provided in this study including age distribution, gender splits and immigration status of workers as well as quarterly data for selected data.

Outlining the rest of the report, the following two sections discuss the accounting frameworks behind the HRM, key tourism concepts and definitions from the TSA, and various labour concepts and definitions from the SNA. The expanded scope of the study, including description of the industries and occupations used are described next. Differences between this study and the feasibility study are also outlined. Selected results are then discussed to demonstrate analytical uses of the HRM. Conclusions and future work come in the last section.

Appendix A summarizes the data sources and Appendix B outlines the methodology. Appendix C provides a list of North American Industrial Classification System (NAICS) industries included in the study while Appendix D lists the occupations. A summary of the tables available in the HRM is included in Appendix E. A glossary of terms and list of references are also provided.

2. Framework

The HRM is based on and rooted in the accounting framework of the Canadian TSA, which follows the international guidelines in **Recommended Methodological Framework: Tourism Satellite Account (TSA:RMF)**.³ In turn, the TSA:RMF is based on the accounting framework and principles of the internationally recognized System of National Accounts 1993 (SNA).⁴

Because the HRM uses the same framework, concepts and definitions as the Canadian TSA (CTSA), results from both can be readily compared. By extension, the HRM results can be readily compared to those of the SNA, 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.⁵

2. See "Feasibility Study on a Tourism Human Resource Module", February 2005, Statistics Canada.

3. 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.

4. 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.

3. 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, by industry. 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 (for example four months) counts as only a fraction of a job (one-third of a job) for the year. It should also be noted that a part-time job at ten 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.⁶ 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 SNA to calculate labour productivity.⁷ The concept here is that of actual hours worked, not usual hours, and of hours worked, not hours paid (see Appendix A.1).

The value of labour inputs to production in an industry is measured by the labour income and mixed income for all jobs in that industry. **Labour income** consists of gross (i.e., before tax) wages and salaries, including tips,⁸ commissions, bonuses, as well as **supplementary labour income** which covers mandatory and non-mandatory employer contributions to pension plans and social insurance and similar benefits. **Mixed income** is the income after expenses of unincorporated business accruing to the self-employed.⁹

The HRM also estimates the number of jobs in an industry that can be directly attributed to, or generated by, tourism demand. These estimates provide the link between the HRM and the TSA/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 in an industry is just the number of jobs attributable to non-tourism (i.e., not directly attributable to tourism demand).

To give 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—represent 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 TSA 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**.

5. *Some conceptual differences exist between the CTSA 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.*

6. *While full-time equivalent jobs is a better measure of labour inputs to production, it is not necessarily a better measure for all purposes. For instance, it is not very useful for assessing the number of people who may need training.*

7. *By combining tourism GDP from the TSA/NTI and hours worked attributable to tourism from the HRM, a measure of tourism labour productivity, which is fully consistent with SNA measures of labour productivity by industry, can be obtained.*

8. *The imputation of unreported tips in the SNA is described in Appendix A.1.*

9. *Mixed income is found in the TSA. For the HRM, on the other hand, an imputation is made for the labour component of mixed income. See the discussion of Step 1 in Appendix B: Methodology.*

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.¹⁰ 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 irrespective 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 provides tourism commodities to visitors that would cease to exist without tourism or would continue to exist only at a significantly reduced level of activity. By this definition, Travel Arrangement 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).¹¹ **Tourism GDP** is the GDP that can be attributed to the production of goods and services consumed directly by visitors.¹² 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.¹³

Several new socio-demographic variables have been added to the HRM. One of these, immigrant status, is defined by place of birth in this study. Thus, an **immigrant** is an individual born outside of Canada. A non-immigrant is an individual born in Canada.

The HRM also includes quarterly data for selected variables. **Seasonally adjusted** quarterly data refer to data that have been adjusted for seasonal variations. For example, the third quarter (July, August and September) is the busiest quarter for tourism in Canada. To properly compare employment in this quarter with others in the same year a seasonal factor has to be calculated. **Unadjusted data** (raw) is also included in this report.

10. The operational definition of tourism will be revised with the new, redesigned Travel Survey of Residents of Canada. Tourism will now include all overnight "out of town" (according to a respondent's perception) 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 40 kilometres.

11. 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 includes 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 might be noted that GDP in the SNA and TSA 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.

12. 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 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.

13. In the TSA, 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.

4. Scope and new methods

The scope of this study was widened considerably from the feasibility study completed in 2005. Instead of only two industries, the HRM includes all tourism industries. The data for each industry was also deepened. Information on age distributions, gender, immigration status and seasonality was included. Four age distributions were chosen:

- (1) 15 - 24
- (2) 25 - 34
- (3) 35 - 44
- (4) 45 and higher.

These age groupings were also split by male/female and by whether the worker was an immigrant or a non-immigrant.

Quarterly seasonal patterns for the workers are also included, however this information is only available for part-time and full-time splits. Appendix E provides a complete list of all the tables available upon request for the HRM. The addition of the new industries and occupations resulted in over 1000 tables of information available in the HRM.

4.1 Changes in the current HRM

Besides the addition of more industries and new socio-economic variables, several other changes were made to data sources, methodology and the scope of this study compared with the feasibility study. The time frame of this study included the years 1997 to 2002. The feasibility study included data back to 1988. However, the employment data from 1988 to 1996 for the SNA labour productivity benchmarks was unpublished and of lower quality. Therefore, this data was not included in the HRM.

Data sources also changed. More detailed SNA data was available for the socio-economic variables (age and gender) and this data was used as benchmarks for the Labour Force Survey (LFS) data. Furthermore, only one census year was available in the time period under study. Thus the prorating methods used in the feasibility study between census years were not used.

Another change in this study is the inclusion of quarterly data for selected data series. These data are available both in their raw form (not adjusted for seasonal variation) and in seasonally adjusted form (adjusted for seasonal trends).

4.2 Industry classifications

This study uses the North American Industry Classification System NAICS (1997) 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.

Two industries, air transportation and accommodation, were used in the feasibility study. This was expanded to include all tourism industries. However in order to maintain the reliability of the data several tourism industries were grouped together. The industries in the study include:

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

The air transportation industry and the all other transportation industry can be combined to form the transportation industry.

(See Appendix C for a complete list, including NAICS codes).

Employment is also generated in non-tourism industries (e.g. retail trade). This employment is not included in this study as it would involve calculating tourism ratios in almost all industries in the economy.

4.3 Occupational classifications

This study uses the Standard Occupational Classification (SOC) 1991 definitions of occupations. The basic principle of classification of the SOC is that of kind of work performed. 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.

The selection of occupations for this study is based on an examination of the occupational data from the 2001 Census for persons in the experienced labour force whose main job was in one of the tourism industries. Occupations with an estimated 5,000 employed persons (i.e., with underlying samples of roughly 1000 persons) or more were selected for this study. The feasibility study results indicated that occupations with fewer persons employed turned out to be too small to support time series based on much thinner samples from the LFS.

In this study, similar occupations were combined so that more detail could be provided. In other words, they were retained at the three digit SOC level. For example, all managers were joined to make one occupational grouping. This was done largely to maintain sample sizes as a way of reducing the volatility of the estimates. A detailed listing of occupations along with their SOC codes is included in Appendix D.

5. Results

This section highlights some of the results from the HRM. Since the HRM provides a large amount of data, the intent here is to highlight some of the trends in each industry and to illustrate some of the types of analyses the HRM can support.

The HRM allows an analyst to get a snapshot of an industry and the occupations that it comprises. This analysis can be made over time, in this case, from 1997 to 2002. Both the total industry approach and the tourism perspective can be examined. Aggregates for total jobs, hours worked, etc., are, of course, smaller on the tourism side (i.e., attributable to tourism) than on the total side (i.e., attributable to tourism and non-tourism activities). Derived variables, such as average wages and average hours worked are the same (by assumption) on either side. Comparisons can also be made to data in the TSA/NTI and the SNA.

The overall trends in the HRM for both the number of jobs and average wages tend to follow the business cycles found in the rest of economy, as would be expected. For example, as the economy swings up, the number of tourism jobs and the average hourly wage increase or grow more quickly. Conversely, as the economy moves into recession or a slowdown, jobs and average wages usually fall or slowdown. This is evident for most of the occupations in all tourism industries.

Table 1: Human resource module, jobs, average annual hours worked and average hourly wages

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|------------------------------------|------------------|-----------|-----------|-----------|-----------|-----------|
| Jobs | number of jobs | | | | | |
| Total | 1,517,396 | 1,547,910 | 1,637,994 | 1,692,606 | 1,711,049 | 1,753,848 |
| Transportation | 244,652 | 252,471 | 260,079 | 261,392 | 256,326 | 258,592 |
| Air transportation | 65,152 | 69,973 | 72,204 | 74,243 | 70,877 | 71,519 |
| Other transportation | 179,500 | 182,498 | 187,876 | 187,149 | 185,449 | 187,073 |
| Accommodation | 228,507 | 232,469 | 236,828 | 236,227 | 235,284 | 238,884 |
| Food and beverage | 754,035 | 766,726 | 818,341 | 853,772 | 875,258 | 892,026 |
| Recreation | 249,929 | 255,335 | 279,771 | 295,543 | 299,034 | 318,367 |
| Travel services | 40,274 | 40,909 | 42,974 | 45,672 | 45,147 | 45,979 |
| Average annual hours worked | hours per year | | | | | |
| Total | 1,575 | 1,593 | 1,590 | 1,583 | 1,561 | 1,558 |
| Transportation | 1,805 | 1,801 | 1,805 | 1,803 | 1,782 | 1,800 |
| Air transportation | 1,725 | 1,705 | 1,703 | 1,702 | 1,696 | 1,703 |
| Other transportation | 1,838 | 1,843 | 1,850 | 1,849 | 1,820 | 1,841 |
| Accommodation | 1,728 | 1,736 | 1,736 | 1,732 | 1,714 | 1,724 |
| Food and beverage | 1,474 | 1,504 | 1,502 | 1,484 | 1,461 | 1,447 |
| Recreation | 1,476 | 1,483 | 1,485 | 1,528 | 1,512 | 1,514 |
| Travel services | 1,783 | 1,782 | 1,799 | 1,782 | 1,780 | 1,787 |
| Average hourly wages | dollars per hour | | | | | |
| Total | 12.29 | 12.70 | 12.95 | 13.59 | 14.14 | 14.43 |
| Transportation | 21.21 | 21.79 | 22.82 | 23.83 | 24.83 | 25.46 |
| Air transportation | 23.41 | 24.31 | 25.70 | 26.75 | 27.52 | 28.40 |
| Other transportation | 19.15 | 19.46 | 20.17 | 21.14 | 22.33 | 22.75 |
| Accommodation | 10.86 | 11.34 | 11.60 | 12.28 | 12.52 | 12.87 |
| Food and beverage | 8.76 | 9.05 | 9.11 | 9.68 | 10.22 | 10.31 |
| Recreation | 15.12 | 15.80 | 16.14 | 16.50 | 17.33 | 17.66 |
| Travel services | 15.18 | 15.96 | 16.56 | 17.15 | 17.67 | 18.06 |

5.1 Total tourism and tourism demand

This study covers the period 1997 to 2002. This period saw two opposite trends in tourism performance. Between 1997 and 2000, tourism registered strong growth. A low Canadian dollar relative to its United States counterpart, strong economic growth and stable political conditions encouraged this growth. In 2001, the economy started to slow as did tourism. This was followed by the events of September 11th, 2001 which added to the decline in tourism. These effects continued into 2002.

By 2002, over 1.6 million jobs were held in the six tourism related industries studied in this report. This was up from 1.4 million in 1997, a 15.2% increase. On average, persons employed in tourism worked 1,560 hours a year, or approximately 30 hours a week. This included both full-time and part-time workers. Of these jobs, 490 thousand, or 30%, were directly attributable to tourism activity.

Twenty percent, or one out of five workers in tourism related industries, were immigrants or born outside of Canada. However, this share varied by age group. In the 15-24 year old demographic, about one in ten workers were born outside of Canada. This increased to almost one in three for the 45+ group. In other words, immigrants were much more likely to continue working to tourism jobs, or start working in tourism jobs later in life.

Immigrants to Canada also worked longer hours on average than their non-immigrant counterparts. This was the case whether employed full-time or part-time. Immigrants working full-time spent on average just over 40 hours a week at work, 6% more than did non-immigrants. Part-timers worked close to 16 hours a week, again about 6% more than workers born in Canada.

In the 1997 to 2002, jobs held by immigrants were up 14.5%. This was just below the 15.3% gain for non-immigrant workers.

On average, immigrants and non-immigrants earned about the same amount of money per hour. However, when comparing average wage rate by age group, non-immigrants tended to make more money per hour worked. For example, immigrant workers over the age of 45, earned \$16.65 per hour, while non-immigrants made \$19.90.

Slightly over half of tourism workers were female. This share has been moving upward over time. In 1997, slightly less than half of all jobs in tourism related industries belonged to women. Female workers were more likely to work part time than males. Female workers made approximately 25% less than males on average. In each age group, females earned less per hour than males. This discrepancy grew as the age group got older. In the 15-24 group the difference was about 10%. This study did not consider the number of years worked but only the actual age of the worker.

Tourism workers tended to be quite young. Nearly 39% of workers were 15-24 years old, up from 37% in 1997. The other age groups were all below 23%. The 15-24 age grouping was the fastest growing, advancing 19% in the 1997 to 2002 time period. Those in the youngest age grouping were the most likely to work part time. They were also paid about half the amount per hour that the oldest group earned.

The slowdown in tourism activity towards the end of the reference period resulted in employers being more likely to switch towards part time employees. The percent of people employed full time dropped by 0.5 percentage points to 62.6% in 2002.

One of the strengths of the HRM is the possibility to study trends over time. For example, the HRM indicates that on average, hours worked were reduced in 2001 and 2002, reflecting the slowdown in economic activity. Wage increases also slowed. In fact, 2002 registered the smallest increase in wages and salaries (+1.8%) of all years in the study. The year 2001 realized the smallest gain in jobs (+12,000) while 1999 (+87,000) had the largest.

Tourism jobs tended to be higher paying than those for the total industry since a higher percentage of jobs in high paying industries such as air transportation were attributable to tourism. Three-quarters of jobs in the air transportation industry are attributable to tourism. As a result, jobs attributable to tourism earned about 8% more dollars per hour than the total industry jobs. Tourism jobs also were more likely to be full time (69% of total jobs), attracted a slightly larger proportion of immigrants (22%) and females (53%) but not as many young people (32% of labourers in the 15-24 age grouping).

5.2 Industry profiles

The air transportation industry was the highest paying industry amongst the tourism related industries. In 2002, the average hourly wage was \$28.40. Air pilots were the highest paid occupation earning over \$48 per hour. Purser and air attendants were the highest employing occupation at 11,500 jobs. The airline sales and service agent occupation was the fastest growing, reflecting a trend by airlines to move away from travel agency bookings and towards their own in-house flight reservations. Employment in the air transportation industry grew only 10% over the 1997 to 2002 time period as a result of large job cuts (-3,500) in 2001. Over two-third of the persons employed in air transportation were male.

Table 2: HRM industry summary

| | Total jobs | Percent of total | Age groupings | | | | Gender | |
|----------------------|------------|------------------|---------------|-------|-------|------|---------|--------|
| | | | 15-24 | 25-34 | 35-44 | 45 + | Male | Female |
| | | | percent | | | | percent | |
| Total | 1,611,858 | 100.0 | 38.9 | 19.3 | 19.1 | 22.7 | 49.4 | 50.6 |
| Transportation | 236,674 | 14.7 | 8.6 | 18.2 | 29.6 | 43.6 | 75.6 | 24.4 |
| Air transportation | 70,872 | 4.4 | 13.0 | 28.8 | 31.1 | 27.1 | 63.6 | 36.4 |
| Other transportation | 165,803 | 10.3 | 7.0 | 14.1 | 28.9 | 50.0 | 80.2 | 19.8 |
| Accommodation | 228,974 | 14.2 | 28.2 | 19.4 | 22.1 | 30.3 | 40.5 | 59.5 |
| Food and beverages | 856,242 | 53.1 | 50.7 | 19.1 | 15.5 | 14.6 | 44.4 | 55.6 |
| Recreation services | 247,397 | 15.3 | 40.3 | 19.4 | 17.4 | 22.9 | 54.4 | 45.6 |
| Travel services | 42,572 | 2.6 | 13.6 | 28.5 | 26.9 | 30.9 | 27.9 | 72.1 |

The accommodation industry employed 228 thousand people in 2002, 70% of these were jobs directly attributable to tourism. Nearly 60% of the jobs in this industry were held by females. The industry paid slightly less than the tourism average. Light duty cleaners, at 62,000 jobs, was the largest occupation while hotel front desk clerks 14% grew the fastest. Jobs in the industry advanced only 5% from 1997 to 2002. This industry is in the process of shifting many of its non-accommodation related jobs (such as food and beverage workers) out of its industry by outsourcing these jobs or by selling their food service functions.

The food and beverage industry is the largest employer amongst the tourism related industries. Over half of all tourism related jobs were found in this industry. This is the lowest paying industry (\$10.31 per hour) and the youngest with over half of its employment in the 15- 24 age grouping. Partially as a result of this, this industry also has the highest percentage of its jobs as part time (47%).

The other transportation industry is a mix of several industries including bus, rail, water, taxi and vehicle rental. Over 187,000 people held jobs in this industry in 2002, the second highest paying in tourism. This industry has a high percent of self-employed workers (11%) because of the inclusion of taxi drivers. Only 16% of this industry's workers are employed as a result of tourism activity because a large portion of the industry's business is attributable to hauling freight (particularly rail and water transportation). Bus drivers are the most common occupation in this industry, employing over 46,000 people in 2002. On average, these drivers earn \$21 an hour and over half of those employed in this occupation are non-immigrants and over 45 years old.

The recreation industry was the fastest growing of all tourism related industries from 1997 to 2002, advancing over 27% to 318 thousand jobs. About one-quarter of the jobs in this industry are directly attributable to tourism. This industry employs more males than females and only 13% of the employees are immigrants. "Attendants in amusement, recreation and sport" was the most common occupation in this industry, employing over 31 thousand people in 2002. Over 40% of these people were in the 15-24 age grouping. The average wage per hour was \$16.75.

The travel services industry registered nearly 46 thousand jobs in 2002. The jobs were generally full time (85%) and over 70% were held by females. Travel counsellors, who earned \$30,000 per year in 2002, were the most common occupation in this industry. Nearly all of the jobs in this industry are attributable to tourism.

5.3 Labour productivity

Labour productivity increased for most tourism industries over the 1997 to 2002 time period, increasing 3% overall. Productivity growth was especially strong for the other transportation industries (+14%) and recreation (+12%). Air transportation registered a decline over the 1997 to 2002 time period. Large losses in profit in 2001 and 2002 as a result of the events of September 11th resulted in a 14% decline in productivity. Productivity for air transportation had increased over 15% from 1997 to 1999.

Table 3: Labour productivity

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|----------------------|------------------------------------|-------|-------|-------|-------|-------|
| | GDP per hour worked (1997 dollars) | | | | | |
| Total | 19.27 | 19.45 | 19.95 | 20.10 | 20.13 | 19.84 |
| Transportation | 35.94 | 36.78 | 39.53 | 40.19 | 39.30 | 37.37 |
| Air Transport | 34.51 | 35.41 | 39.65 | 39.20 | 36.69 | 33.52 |
| Other transportation | 38.74 | 39.45 | 39.29 | 42.14 | 44.26 | 44.31 |
| Accommodation | 16.06 | 16.24 | 16.06 | 16.14 | 16.54 | 16.83 |
| Food and Beverages | 12.19 | 12.05 | 12.07 | 11.96 | 12.05 | 12.14 |
| Recreation services | 17.30 | 17.80 | 17.83 | 17.81 | 19.04 | 19.34 |
| Travel services | 19.70 | 20.27 | 20.78 | 21.22 | 21.18 | 20.41 |

The food and beverage industry had the lowest level of productivity, reflecting its low wage rates. The transportation industries had the highest labour productivity levels. The transportation industries are less labour intensive than the other tourism industries.

5.4 Seasonality

Not surprisingly, tourism has a seasonal nature in Canada. This translates into more jobs in the summer months, the third quarter of the year. Just over 26% of jobs are found in this quarter. The first quarter of the year (January, February and March), has the fewest number of jobs at 24%, or about 30,000 less jobs. Seasonal patterns within tourism vary over time and by industry. For example, the third quarter's share of total employment has slowly decreased over time.

The accommodation industry, followed by recreation, has the largest seasonal swings in its employment patterns. Accommodation employed 27% of its workers in the third quarter, an increase of over 10,000 from the first quarter. The travel services and air transportation industries are different than other tourism industries in that their quarter with the highest employment is the fourth quarter of the year.

6. Conclusions and future work

The HRM provides over 1000 tables of employment related information on tourism in Canada. This vast amount of information provides a rich database for the planning and analysis of tourism employment. The linking of the HRM with other tourism databases such as the TSA and the NTI, allows for even greater analysis. Variables such as labour productivity (GDP divided by hours worked) can now be calculated.

This study has incorporated the recommendations made in the previously released feasibility study on the HRM. A new time frame, 1997 to 2002, was implemented; tourism ratios were calculated for each occupation within each industry, and socio-demographic variables, like gender, age and immigration status, were added. Seasonal factors have also been analyzed with the inclusion of quarterly data for selected aggregates.

It is recommended that an annual update be done to the HRM to improve the timeliness of the data. A reference year two years behind the actual date, (e.g., publishing 2004 data in 2006) is possible with the current data available. In fact, this could be reduced to a one year lag if the HRM was released in the fall of the year published.

Appendix A: Data sources

There are four main sources of data underlying the Human Resource Module estimates. They are the labour productivity data in the System of National Accounts, the Census, the Labour Force Survey (LFS), and the Survey of Employment Payroll and Hours (SEPH).¹⁴ These are described below, along with their main uses.

A.1 System of National Accounts

The labour productivity database in the SNA provides the industry totals for employee jobs and hours worked, labour income, wages and salaries, supplementary labour income, for both full-time and part-time jobs, age distribution and gender. 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. The feasibility study provided data back to 1988. However, the earlier data have not been published and the reliability of the data was deemed too poor to be included in this study.

The labour productivity data for jobs are based 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.¹⁵ Additions are made for employment not covered by the LFS (e.g., regular military, employed persons in the territories, 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.¹⁶ 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; and
- 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; and
- 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.

14. *The Survey of Traveller Accommodation was investigated as a potential source, but its time series results for jobs were considered unsuitable.*

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

16. *For more details on the current SNA 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, September 29, 2004, Lisbon, Portugal.*

In the national accounts, 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 T-4 system (e.g., employer contributions to Employment Insurance and Canada and Quebec pension plans, administrative data on registered pension plans and from workers compensation boards, as well as other survey sources (for benefits like life, accident and health insurance).

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

- Performing arts and spectator sports and related industries (NAICS 711)
- Amusement 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 tips in personal care services (barbershops and beauty salons, etc.) and railway transportation (for luggage porters) industries.

It might be noted as well 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.

With this study, SNA data were further used to split jobs by age distribution and gender. These data, which were not used in the feasibility study, provided reliable data already published on an SNA basis. This improved the quality of data in the HRM.

A.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 Census was used primarily to distribute the SNA totals on employee jobs, hours worked and wages and salaries across occupations.

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

The sample was 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). It should be noted that, industry 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 used the Standard Occupational Classification 1991 classification for occupations.

A.3 Labour Force Survey

The Labour Force Survey is conducted monthly and includes approximately 53,500 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 is based on NAICS, while occupation data use SOC 1991.

The LFS is used here to develop the time series on jobs and hours worked by occupation, age and gender for all industries. As mentioned previously, the LFS is used in the SNA to establish overall number of jobs totals.

A.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 remove rooming and boarding houses from the SNA totals and to develop the accommodation time series. As mentioned earlier, SEPH is also used extensively in the SNA to determine the industry distributions of employee jobs. SEPH data was also used as an indicator in the seasonal adjustment of the HRM data.

Appendix B: Methodology

The basic methodology consists essentially of eight steps:

- 1) taking data developed in the SNA for jobs, hours worked, and wages and salaries,
- 2) distributing the SNA data and further disaggregating them using data from the SNA for full-time and part-time jobs, age distribution and gender,
- 3) distributing the SNA totals for 2000 across occupations based on Census data,
- 4) building time series from these benchmarks based on movements in corresponding series from the LFS and/or industry surveys,
- 5) smoothing the time series for LFS occupations, while keeping the overall industry totals; and
- 6) making limited, final adjustments to data values. This step completes the estimates for total employment of the HRM.

The tourism employment estimates, are obtained in a seventh step:

- 7) adjusting the aggregates for all jobs, hours worked and earnings according to the share of tourism employment in total employment, leaving averages unchanged. This step completes the detailed estimates for age distribution, gender and immigration status.

Quarterly data, providing data on seasonal patterns, are obtained in an eighth step:

- 8) splitting annual data into quarterly data. This data is seasonally adjusted so that the variations due to seasons can be observed.

This appendix describes the methodology and implicit assumptions in more detail.

Step 1: Benchmark totals

The industry totals on 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, age distribution and gender come from the labour productivity database which are based on SNA principles.

These data did not exactly meet our requirements, however, and a number of adjustments were needed. In particular:

- 1) The split of wages and salaries between full- and part-time jobs is made as follows:
 - the full-time share is initially set equal to the full-time share of hours worked (so if full-time employees account for 70% of hours worked, they are allocated 70% of wages and salaries)
 - this initial estimate is adjusted with Census data to the extent to which the full-time share of wages and salaries exceeds the full-time share of hours worked (so if full-time employee jobs account for 72% of the earnings and 70% of the hours, the estimate in the first step is raised by 2.9%, or a factor of $1.029 = 72/70$)
 - this adjustment factor is used for all years in the study
- 2) 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.
- 3) The SNA jobs data follows the SNA version of NAICS, which is simply a special aggregation that defines the working 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). The inclusion of rooming and boarding houses requires an adjustment to remove it. 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.

Step 2: Distribution of SNA data by age and gender

New data from the labour productivity database in the SNA has become available since the feasibility study was published. This data splits jobs, hours worked and income by age distribution and gender. This information was adapted to fit the age distributions required for the HRM. They were then used to disaggregate the data.

Step 3: Distribution of industry totals by occupation

The best information on the occupational distribution of jobs comes from the Census. Step 3 involves using this source to distribute the SNA totals by occupation.

The discussion here relates only to employee jobs, as occupational details were not developed for the self-employed. The Census of Population was used to distribute the industry totals established in the first step for the year 2000 (i.e., the reference year for the 2001 census).

To develop occupational distributors for the industry totals, special census tabulations were done identifying persons in the tourism industries who had employment income in the reference year and were not self-employed. The selected persons were 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 was 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.

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.

Step 4: Building the occupational time series

Step 4 entails using the corresponding LFS annual average series by occupation, age distribution and gender to build a time series. Information on immigration status is not available from the LFS and therefore the percentage distribution from the Census reference year (2000) was maintained for all years. The LFS occupation and industry data matched those used in the Census, therefore easing the process. The LFS data were adjusted to the Census level to maintain growth rates between years.

Steps 5 and 6: Smoothing the LFS data and manual adjustments

Step 5 entails smoothing (using a four-year moving average) to reduce volatility in the occupational time series found in the LFS. The smoothing process only affected the occupational levels but did not change the totals, which remained benchmarked to the SNA data.

As indicated in the feasibility study, the results from Step 4 exhibited highly volatile and often implausible movements in many of the time series at the occupational level of detail, especially for small aggregates such as part-time jobs. This seemed to be clearly due to small samples and a great deal of sampling variability in the underlying indicators from the LFS in particular. It was determined at that point that smoothing techniques (as "light" as possible) and limited manual interventions would be required in order to bring stability, consistency and plausibility to the detailed time series.

With this study, smoothing of the data has been carried out. It has been implemented in a way that preserves the overall industry totals (from the SNA) and the occupational distributions (from the 2000 census), as these benchmarks are constraints that must be respected.

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 (to make the numbers make sense).¹⁷

The last step in developing the total industry estimates involves manual adjustments when the smoothed series appear out of line, or are notably inconsistent with the hours worked or wages and salaries, or generate erratic movements in the implied average annual hours or average hourly earnings. Results from the feasibility study indicate that the smoothing and manual adjustments have little effect on the general pattern of the occupational distributions. However, they notably reduce the volatility of year-to-year growth rates. Approximately 1% of the data cells were adjusted after the smoothing.

Step 7: Application of tourism ratios

The next step involves estimating the number of jobs, hours worked and wages and salaries, by gender, age distribution and immigration status attributable to tourism. To do this, implicit tourism ratios are determined from the employment generated by tourism from the NTI.

In this study, unlike the feasibility study, tourism ratios were calculated for each occupation within each industry individually. In the feasibility study one ratio was applied across all jobs, hours worked and income variables, for employees and the self-employed, part- and full-time, across all occupations. The ratios were calculated according to their tourism content. For example, in the case of air transportation, approximately 77% of jobs are considered to be attributable to tourism, meaning (according to TSA convention and practice) that 77% of the industry's GDP and employment can be attributed to tourism demand (most of the rest is attributable to freight operations). Can 77% of the jobs in each occupation be reasonably or plausibly attributed to tourism? Probably not.

Pursers and flight attendants are not required to move cargo. Almost 100% of their employment would seem to be, and could be, attributed to tourism demand. But then, less than 77% of the employment in other occupations would have to be attributed to tourism, otherwise the industry ratio could not be satisfied. In this study, each occupation was given a tourism ratio related to its tourism activity. The ratio was based on commodity tourism ratios. After these were applied, the totals were benchmarked to the NTI data so that the HRM and the NTI have consistent employment data.

It might be noted that the tourism ratios here are not exactly the same as those published in the TSA. This arises because the SNA jobs numbers used in developing the HRM series have changed from the ones that were available at the time the TSA 2000 was prepared.

Step 8: Seasonal adjustment of the data

The last step involves taking the annual data and transforming them into quarterly time series. This was done using NTI and SEPH data as quarterly indicators. Total employment data was transformed using NTI quarterly employment data as an indicator. Hours worked and wages and salaries used SEPH data for matching industries. This data was then seasonally adjusted (removing the seasonal trend in the data).

17. *Keeping manual adjustments to a minimum is a key consideration for an ongoing HRM operation. It is important to know that a system can be put in place that will generate plausible numbers that will not require too much manual intervention. Such adjustments, while based on professional judgement, are nonetheless subjective, time-consuming and costly as well.*

Appendix C: Tourism industries in the HRM

(1997 NAICS)

1. Air transportation

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

2. All other transportation industries

- 4821 – 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 group passenger transportation
- 4871 – Scenic and sightseeing transportation, land
- 4872 – Scenic and sightseeing transportation, water
- 4879 – Scenic and sightseeing transportation, other
- 5321 – Automotive equipment rental and leasing

3. Accommodation

- 7211 – Traveller accommodation
- 7212 – RV (recreational vehicle) parks and campgrounds

4. Food and beverage services

- 7221 – Full-service restaurants
- 7222 – Limited-service eating places
- 7224 – Drinking places (alcoholic beverages)

5. Recreation and entertainment

- 51213 – Motion picture and video exhibition
- 7111 – Performing arts companies
- 7112 – Spectator sports
- 7115 – Independent artists, writers and performers
- 7121 – Heritage institutions
- 7131 – Amusement parks and arcades
- 7132 – Gambling industries
- 7139 – Other amusement and recreation industries

6. Travel services

- 5615 – Travel arrangement and reservation services

Appendix D: Tourism occupations in the HRM

| Occupations | SOC 1991 |
|---|----------|
| Accommodation | |
| Accommodation service managers | A222 |
| Chefs | G411 |
| Cooks | G412 |
| Bartenders | G512 |
| Food and beverage servers | G513 |
| Hotel and front desk clerks | G715 |
| Light duty cleaners | G931 |
| Janitors, caretakers and building superintendents | G933 |
| Food counter attendants and kitchen helpers | G961 |
| All other accommodation occupations | |
| 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 |
| Railway carmen/women | H414 |
| Motor vehicle mechanics, technicians and repairers | H421 |
| Bus drivers and subway and other transit operators | H712 |
| Taxi and limousine drivers and chauffeurs | H713 |
| Railway and yard locomotives engineers | H721 |
| Railway conductors and brakemen/women | H722 |
| Railway track maintenance workers | H732 |
| 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 and kitchen helpers | G961 |
| Delivery drivers | H714 |
| All other food and beverage occupations | |

Recreation and entertainment

| | |
|---|------|
| Facility operation and maintenance managers | A141 |
| Recreation and sport program and service directors | A343 |
| Program leaders and instructors in recreation/sport | F154 |
| Retail salespersons and sales clerks | G211 |
| Cashiers | G311 |
| Security guards and related occupations | G631 |
| Attendants in amusement, recreation and sport | G731 |
| Janitors, caretakers and building superintendents | G933 |
| Landscaping and grounds maintenance labourers | I212 |
| All other recreation and entertainment occupations | |

Travel agent services

| | |
|--|------|
| Retail trade managers | A211 |
| Travel counsellors | G711 |
| All other travel agent service occupations | |

Appendix E: Table summary

There are over 1000 data tables available in the HRM. The structure of these tables are detailed below.

Tables are available for each of the six tourism industries (see Appendix C) included in the HRM, as well as a total for all industries. The air transportation and all other transportation industries are also combined to form the transportation industry.

Total employment and tourism employment is available for all industries. These variables are split into the following categories:

- Full-time female
- Part-time female
- Full-time male
- Part-time male
- Total full-time
- Total part-time
- Total female
- Total male
- Total

Each of the above categories are split into occupational details (see Appendix D). Each occupation is further separated into:

- Number of jobs
- Hours worked
- Wages and salaries

These three variables then are divided up into four age categories:

- 15-24
- 25-24
- 35-44
- 45+

The age categories are split into immigrant and non-immigrants. Quarterly data is also provided for selected variables. These include:

- Number of jobs
- Hours worked
- Wages and salaries

The quarterly data then takes these three variables and splits them into:

- Total jobs
- Total employees
- Full-time employees
- Part-time employees
- Self employed

Tables are available upon request from the Income and Expenditure Accounts Division of Statistics Canada, Ottawa (613 951-3640).

Glossary of terms

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 unduplicated value of production originating within the boundaries of Canada, regardless of the ownership (resident or non-resident) of the factors of production. GDP can be valued at either basic prices or 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 born outside of Canada.

Industry: A generally homogeneous group of economic producing units primarily engaged in a specific set of activities. An activity is a particular method of combining goods and service inputs, labour and capital to produce one or more goods and/or services (products). The activities that define an industry are homogeneous with respect to the production processes used.

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: All earnings from employment for work performed, whether cash or in kind, and before deductions for income taxes, unemployment insurance, pensions and other social insurance schemes, plus Supplementary Labour Income.

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

Mixed income: Is the value added minus the compensation of employees and taxes on production payable plus subsidies receivable (or the net income) of unincorporated enterprises owned by members of households, either individually or in partnership with others, in which the owners, or other members of their households, may work without receiving any wage or salary. Mixed income contains an unknown element of remuneration for work done by the owner of the enterprise, or other members of the same household, as well as the surplus accruing from production.

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 born in Canada.

Occupation: A collection of jobs, sufficiently similar in work performed (tasks, duties and responsibilities) to be grouped under 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 Accounts but also expands the analytical capacity for selected areas of 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 (SLI): Mandatory and non-mandatory employer contributions on behalf of employees for pension funds, social insurance and similar benefits.

System of National Accounts (SNA): 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. It provides a comprehensive accounting framework within which economic data can be compiled and presented in a format that is designed for purposes of economic analysis, decision-taking and policy-making.

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

Tourism: 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 not related to the exercise of an activity remunerated from within the place visited.

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

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

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

Tourism industry: Is an industry that would cease to exist or would continue to exist only at significantly reduced levels of activity in the absence of tourism.

Tourism Satellite Account (TSA): A satellite account of the SNA that focuses on visitor spending on goods and services, the supply of these goods and services, and the resulting value added and jobs generated.

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

Wages and salaries: Includes earnings from employment before taxes and other deductions. It includes tips, commissions and bonuses. Income from self-employment is not included.

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