



Travel-log

Autumn 1998

Trends and Cycles in Tourism as Revealed by the National Tourism Indicators¹

by David Wilton from the University of Waterloo

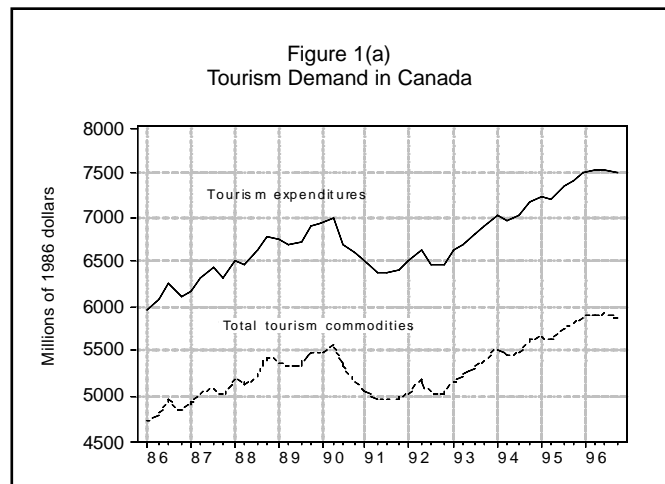
In June 1997 Statistics Canada released revised National Tourism Indicators (NTI) data for the 1986 to 1996 period. NTI data can be used for three general purposes: to monitor the current state of tourism in Canada, to analyse the economic structure of tourism and its policy ramifications, and to study statistical trends and cycles in tourism.

The purpose of this article is to describe the statistical trends and cycles in tourism demand in Canada, the supply of tourism commodities, and tourism employment during the 1986 to 1996 period, as revealed by the new and improved NTI data. Since this article does not consider seasonal patterns in the NTIs (the statistical analysis uses seasonally adjusted data), the characteristics of the strong seasonal tourism pattern are briefly noted. It will come as no surprise to anyone in the tourism industry to learn that tourism peaks in the third quarter each year, and is followed by the Winter blues. Tourism demand in Canada is roughly twice as large in the third quarter as in the first and fourth quarters.

An Overview of Trends and Cycles in Tourism Demand, Supply, and Employment

Tourism is a leading growth sector and job creator in the Canadian economy. From the first quarter of 1986 to the fourth quarter of 1996, total tourism expenditures in Canada (measured in constant 1986 dollars) increased by 26%, almost 2 percentage points greater than the increase in Gross Domestic Product (GDP). The increase in tourism expenditures was accompanied by a 22 percentage increase in tourism employment in tourism industries, twice as large as the 12% increase in employment in the entire Canadian business sector.

¹ Adapted from a paper prepared for the Canadian Tourism Commission entitled, "Recent Developments in Tourism as Revealed by the National Tourism Indicators," by David Wilton.



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Tourism Demand in Canada

Tourism expenditures increased from \$5,967 million in the first quarter of 1986 to a peak of \$7,005 million in the second quarter of 1990. During the recession of the early 1990s tourism expenditures fell to a low point of \$6,374 million in the third quarter of 1991. The mid-1990s recovery in the Canadian economy lifted tourism expenditures to about \$7,500 million (per quarter) in 1996. Tourism demand in Canada for total tourism commodities follows a similar cyclical path; the lower line in Figure 1(a) rises to a peak in the second quarter of 1990, declines to a low point in the second quarter of 1991, and then climbs to new highs in 1995 and 1996.

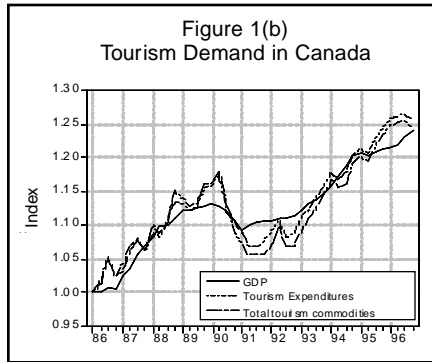


Figure 1(b) compares tourism demand in Canada to GDP, both measured in 1986 prices. To facilitate graphical comparisons, GDP and tourism demand have been indexed to a value of 1.00 in the first quarter of 1986. Except for the 1991 to 1993 recession period, the index line for tourism expenditures is higher than the index line for GDP. Actual tourism expenditures have risen at a slightly faster pace than GDP during the 1986 to 1996 period. At the end of 1996 the index value for tourism expenditures is 1.255 (tourism expenditures have increased by 25.5% in real terms), compared to an index value for GDP of only 1.239.

The index lines in Figure 1(b) show that the 'business cycle' is much more pronounced in the tourism sector than it is for the Canadian economy as a whole. There are much bigger waves for

tourism demand in Canada than for GDP. Tourism expenditures and tourism demand for total tourism commodities declined by 9.0% and 10.6% respectively during the 1990 to 1991 recession. Given that GDP fell by only 3.5% during this recession, the cyclical downswing in tourism demand is about 3 times larger than the cyclical downswing in the overall economy. The 1993 to 1996 recovery has also been stronger for tourism demand than for the overall economy. Tourism rides a giant cyclical roller-coaster, as well as a jumbo seasonal roller-coaster.

Tourism Domestic Demand

As shown in Figure 2, domestic and export tourism expenditures do not move together. There are signs of a business cycle in domestic tourism expenditures but little evidence of a business cycle in export tourism expenditures. Comparing end points of the plotted lines, there is a much more pronounced positive trend in tourism export data. As a proportion of total tourism expenditures, exports have increased from 23.8% of the total in the first quarter of 1986 to 30.1% in the fourth quarter of 1996.

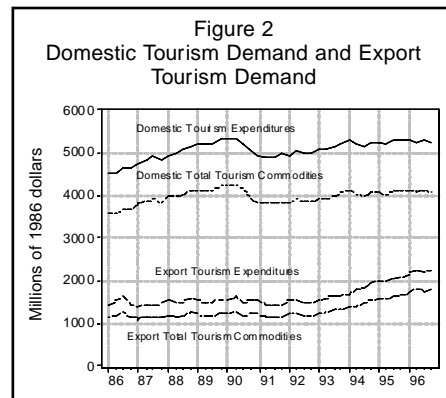


Figure 3 plots indexed domestic tourism expenditures data, along with indexed GDP data. Compared to cyclical movements in GDP, domestic tourism expenditures have a much more pronounced cycle during the recovery of the late 1980s and the 1990 to 1991 recession (the first quarter of 1990 peak to the third quarter of 1991 trough decline in domestic tourism expenditures is 8.6%,



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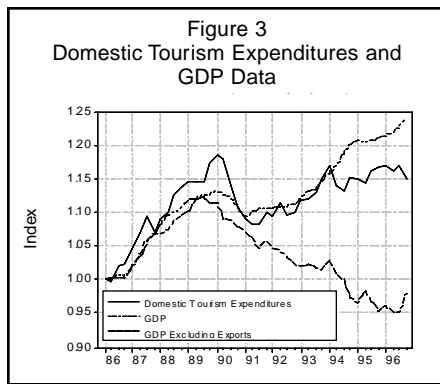
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compared to a 3.5% peak to trough decline in GDP), but have grown more slowly during the 1993 to 1996 recovery period.

A comparison of domestic tourism expenditure growth with GDP growth is somewhat misleading. Exports have been excluded from tourism expenditures but are included in GDP. It is perhaps more appropriate to compare domestic tourism expenditures with GDP excluding exports. As shown in Figure 3, the index line for GDP excluding exports is very different from the index line for GDP during the 1990s. Without the tremendous surge in exports during the 1990s (because of a depreciating value of the Canadian dollar and the Canada-U.S. Free Trade Agreement), Canadian output would have declined. Removing exports from both tourism expenditures and GDP reveals that the 15% growth in tourism domestic demand during the 1986 to 1996 period substantially exceeded the growth in output for the domestic market.

Tourism Exports

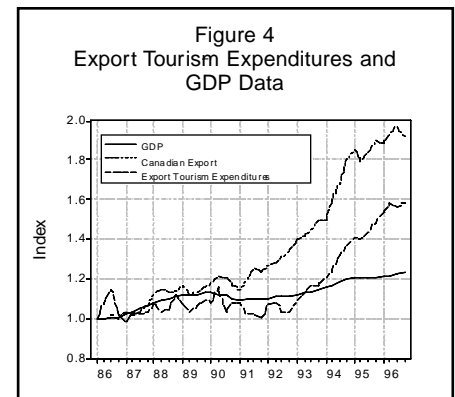
Tourism exports, which are purchases of Canadian commodities by foreign visitors, depend primarily on economic conditions in the foreign visitor's home country (not in Canada) and on the value of the foreign exchange rate.

During the 1986 to 1992 period there is no obvious trend or cycle observed although tourism export expenditures absorb numerous bumps along the way. Two of the larger bumps are explained by special events in Canada. Expo86 resulted in a surge of tourism exports in the second and third quarters of 1986; third quarter tourism exports were 15% higher than in the first quarter. A smaller

up-tick occurred during the Calgary Olympics, with passenger air transportation accounting for almost one-half of the increase in tourism exports in the first quarter of 1988.

In 1993 tourism exports end their bumpy, trendless path and begin to increase at a rapid rate. Tourism exports increased 52% from the fourth quarter of 1992 to the fourth quarter of 1996. This large increase in tourism export expenditures which began in 1992 is easily explained. The Canadian dollar depreciated from US\$0.89 in late 1991 to less than \$0.71 in early 1995 (and around \$0.73 in 1996), reducing the foreign cost of a Canadian trip or holiday by about 20% for American visitors. There was an even greater depreciation in the value of the Canadian dollar when measured against the Japanese yen (47%), the German mark (31%), and the French franc (31%) during the 1991 to 1996 period. The positive effects from a depreciation in the external value of the Canadian dollar reinforced the positive income effects from the strong recovery taking place in the United States and world economies, resulting in a 58% increase in tourism export expenditures over the 1991 to 1996 period.

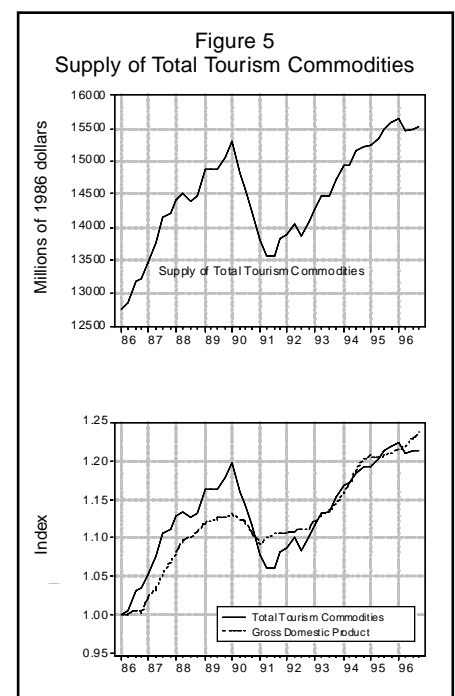
The growth in tourism exports during the 1986 to 1996 period far exceeds the growth in GDP; in Figure 4 the indexed line for tourism export expenditures ends at a value of 1.58 compared to a value of 1.24 for GDP. However, this 58% increase in tourism exports is less than the 92% increase in all Canadian exports. Three factors provided great stimulus to Canadian exports in the 1990s: a strong recovery in the United States, the large depreciation in the external value of the Canadian dollar, and the signing of the Canada-U.S. Free Trade Agreement (FTA). Since most tourism expenditures are for services which are not subject to tariffs, the FTA had a large positive effect on Canadian exports of goods but a minimal effect on tourism expenditures. Thus, it is not surprising that the growth in tourism export expenditures during the 1990s is less than the growth in all exports. What is surprising is the magnitude of the



increase in tourism export expenditures, particularly during the 1990s.

Supply of Tourism Commodities

The upper graph in Figure 5 plots quarterly seasonally adjusted data for the supply of total tourism commodities and the lower graph plots the supply of total tourism commodities indexed to a value of 1.00 in first quarter of 1986. The trend and cycle story for the supply of total tourism commodities is very similar to the story for tourism demand in Canada (see Figure 1).²



² The indexed line for the supply of total tourism commodities ends at a value of 1.215, compared to an end value of 1.244 for tourism demand for total tourism commodities.

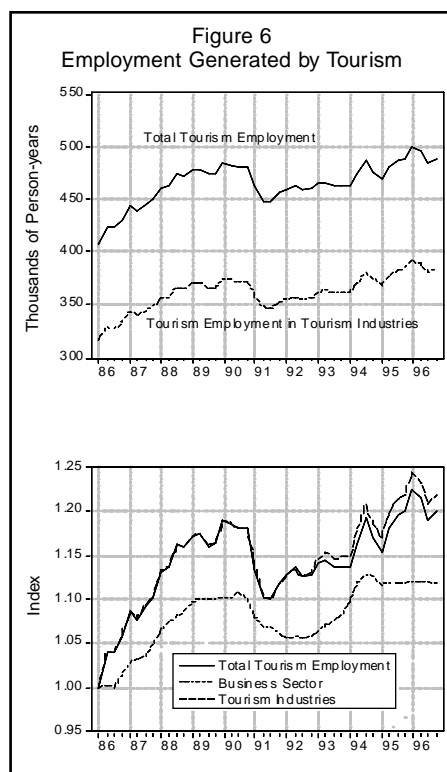
While the supply of total tourism commodities trends upwards, it is subject to a very severe business cycle. As found in Figure 1, the index line for the supply of total tourism commodities lies above the index line for GDP during the expansionary 1986 to 1990 period and below the index line for GDP during the 1991 to 1992 recession. The business cycle in the supply of total tourism commodities is much more pronounced than for the supply of all goods and services (GDP). The 1990 to 1991 cyclical downswing in the supply of total tourism commodities of 11.5% is over 3 times larger than the 3.5% cyclical downswing in GDP.

Employment Generated by Tourism

Figure 6 presents seasonally adjusted data for person-years of total tourism employment and tourism employment in tourism industries generated by tourism. In the lower graph an index for person-years of employment in the Canadian business sector is presented for comparison purposes. Tourism employment also has very pronounced cycles around a rising trend, with the trends and cycles for tourism employment in Figure 6 quite similar to those found for tourism demand and supply in Figures 1 and 5.

Total tourism employment generated by tourism increased from 407,000 person-years in the first quarter of 1986 to 489,200 person-years in the fourth quarter of 1996, a 20% increase. Within tourism industries, tourism employment increased from 315,000 to 384,100, a 22% increase in 11 years, almost twice as large as the 12% increase in employment in the Canadian business sector.

The cycles in tourism employment are more pronounced than the cycles in business sector employment (and in GDP). Tourism employment in tourism industries increased by 19% from the first quarter of 1986 to the first quarter of 1990, compared to a 10% increase in employment in the Canadian business sector (and a 13% increase in GDP). The 1990 to 1991 recession resulted in a 7.5% decrease in tourism employment in tourism industries, compared to a



more modest 4.7% decrease in employment in the Canadian business sector. From the 1991 trough to the end of 1996,

tourism employment in tourism industries increased by 11%, compared to a less than 6% increase in Canadian business sector employment. The cyclical swings in tourism employment are about twice as large as the cyclical swings in Canadian business sector employment.

Tourism Trend Estimates

There are many factors which determine the magnitude of the trend in a NTI over a particular period of time, such as the growth rate in the Canadian economy, a changing value for the Canadian dollar, government deregulation (for example, an 'open skies' policy), and the introduction of casinos. Since these underlying factors will change through time, estimates for the trend in the NTIs are specific to a particular time period. The trend estimates presented in Tables 1 and 2 are for the 1986 to 1996 period and are not forecasts of future trends.

Tourism Demand in Canada

Over the eleven years from 1986 to 1996, tourism expenditures (measured in constant prices) have an estimated

Table 1

Percentage Increase/Decrease in Trend Values (First Quarter 1986 to Fourth Quarter 1996)

	Tourism Demand in Canada	Tourism Domestic Demand	Tourism Exports	Supply of Tourism Commodities
Transportation	8.21	-0.17	62.04	13.53
Passenger air transport	3.61	-6.83	55.85	2.41
Vehicle rental	20.05	-31.53	213.81	12.45
Vehicle repairs and parts	37.42	37.74	27.46	20.74
Vehicle fuel	13.90	13.13	21.75	19.05
Accommodation	39.10	30.23	56.40	39.22
Hotels	42.94	34.69	57.63	43.76
Motels	30.86	18.68	68.95	30.20
Food and beverage services	9.64	-4.15	42.18	4.09
From accommodation services	-14.60	-27.48	14.49	-27.79
From food and beverage services	18.36	4.09	52.60	11.60
Other tourism commodities	41.70	40.69	44.81	30.43
Recreation and entertainment	2.59	-12.16	39.55	18.72
Travel agency services	224.60	222.68	-	225.72
Total tourism commodities	16.93	7.13	53.03	13.70
Total other commodities	27.91	22.21	48.38	n/a
Tourism expenditures	19.18	10.21	52.06	n/a

Table 2

**Percentage Increase / Decrease
in Trend Values for Employment
Generated by Tourism
(First Quarter 1986 to Fourth
Quarter 1996)**

Transportation	11.33
Air transport	17.10
Taxicabs	-19.23
Vehicle rental and leasing	64.28
Accommodation	13.08
Food and beverage services	16.20
Other tourism commodities	1.15
Recreation and entertainment	-11.06
Travel agency	54.30
Total tourism industries	12.72
Other industries	3.83
Tourism employment	10.68

trend increase of 19.18%, almost exactly the same as the estimated trend increase in Canadian GDP (19.34%). On average, tourism expenditures have trended upwards by almost 2% per year during this eleven year period.

The estimated trend increases (decreases) for the components of total tourism demand in Canada are reported in the first column of Table 1. The largest trend increase is for travel agency services, with an estimated trend increase of 224.60% (almost 12 times larger than the estimated trend increase in GDP). There are also large estimated trend increases in tourism demand for hotels (42.94%), motels (30.86%), vehicle repairs and parts (37.42%), other commodities (27.91%), and vehicle rentals (20.05%). At the other end of the spectrum, there is an estimated 14.60% trend decrease in tourism demand for food and beverage services from accommodation establishments. This decrease is in sharp contrast to the 18.36% trend increase in tourism demand for food and beverage services from food and beverage establishments (such as restaurants and bars).

Tourism Domestic Demand

The estimated trend increase for tourism domestic demand is 10.21%. In the

tourism domestic demand column in Table 1, travel agency services again has the largest estimated trend increase (222.68%). Large estimated trend increases are also found for tourism domestic demand for vehicle repairs and parts (37.74%), hotels (34.69%), motels (18.68%), and other commodities (22.21%). Four domestic demand components have negative trend increases: vehicle rentals (-31.53%), food and beverage services from accommodation establishments (-27.48%), recreation and entertainment (-12.16%), and passenger air transport (-6.83%).

The estimated trend decrease of 6.83% in the domestic demand for passenger air transport conceals an interesting story. Strong domestic demand for passenger air transport during the 1986 to 1990 period and a weak post-recession recovery in the 1990s tilts the 1986 to 1996 trend line downwards. The rise and fall of the Canadian dollar during this period is one possible explanation for this negative tilt. During the 1986 to 1990 period the Canadian dollar appreciated by approximately 20% against the U.S. dollar, prompting many Canadians passenger air fares on Canadian airlines to visit American and foreign destinations in order to take advantage of the increased purchasing power of the Canadian dollar outside Canada. The reverse happened in the 1990s as the value of the Canadian dollar fell sharply against the U.S. dollar, prompting many Canadians to forego the purchase of passenger air transportation to U.S. destinations.

Tourism Export Demand

Tourism export demand is the driving force behind the upward trend in tourism expenditures in Canada. The estimated trend increase in tourism export expenditures over the 1986 to 1996 period is 52.06%, compared to a more modest estimated trend increase of 10.21% in domestic tourism expenditures. On average, tourism export expenditures have increased by almost 5% per year during the 1986 to 1996 period.

The estimated trend increases for the components and sub-components of tourism export demand are, with one

exception (vehicle repairs and parts), larger than the estimated trend increases for tourism domestic demand. The estimated trend increases for tourism export demand are largest for vehicle rentals (213.81%), accommodation (56.40%), passenger air transport (55.85%), and food and beverage services from food and beverage establishments (52.60%). The smallest estimated trend increases for tourism export demand are for food and beverage services from accommodation establishments (14.49%), vehicle fuel (21.75%), and vehicle repairs and parts (27.46%).

The Supply of Various Tourism Commodities

The estimated trend increase in the supply of total tourism commodities during the 1986 to 1996 period is 13.70%. As shown in column 4 of Table 1, the largest estimated trend increases are for the supply of travel agency services (225.72%), hotels (43.76%), motels (30.20%), vehicle repairs and parts (20.74%), vehicle fuel (19.05%), and recreation and entertainment (18.72%). As found for tourism demand, the estimated trend increase for the supply of passenger air transport is not significantly different from zero.

There are diverging supply trends in the accommodation industry during the 1986 to 1996 period. While there is an estimated 39.22% trend increase in the supply of accommodation (rooms), the supply of food and beverage services from accommodation establishments has an estimated 27.79% trend decrease. There has been a dramatic structural decline in the proportion of hotel and motel revenues arising from the sale of food and beverage services.³ Hotels and motels are increasingly in the room business, not the food and beverage business.

³ The proportion of hotel revenues from the sale of food and beverage services has fallen from 53% in 1986 to 41% in 1994 to 1995; for motels the proportion of revenues from the sale of food and beverage services has fallen from 30% to 20% during the 1986 to 1995 period (see Traveller Accommodation Statistics).

Employment Generated by Tourism

As shown in Table 2, the estimated trend increase in tourism employment in total tourism industries (generated by tourism demand) during the 1986 to 1996 period is 12.72%, representing an increase of 43,000 person-years of employment in the tourism industry. This 12.72% trend increase in tourism employment in tourism industries exceeds the estimated trend increase in employment in the Canadian business sector by almost 4 percentage points.

There is only minor variation in the estimated trend increases in tourism employment within various tourism industries. During this eleven year period, the estimated trend increases in tourism employment in the transportation, accommodation, and food and beverage industries are 11.33%, 13.08% and 16.20% respectively, representing 8,400, 15,500 and 18,900 additional person-years of employment in each tourism industry. The two tourism industries with the largest estimated trend increases are vehicle rental

agencies (64.28%) and travel agencies (54.30%), but both are relatively small industries within the overall tourism industry.

Cycles in Tourism

Most Canadian tourism indicators 'cycle' around a rising trend, with the cycles frequently swamping the trend. Given that tourism rides the waves in the overall economy, this article provides answers to the following cyclical questions: how much of the cyclical variation in a particular tourism indicator can be explained by the cyclical variation in the overall Canadian economy (that is, the Canadian business cycle); are the cyclical fluctuations in the tourism indicator relatively larger or smaller than the cyclical fluctuations in the overall Canadian economy?

Table 3 summarizes the statistical answers to these 'cyclical' questions. The first four columns of numbers in Table 3 indicate the percent of the cyclical variation in a particular tourism indicator which can be statistically explained by the cyclical variation in GDP. No entry

is recorded in Table 3 if the statistical estimate is not significantly different from zero at the .05 level. The last four columns indicate the sensitivity of the tourism cycle to the GDP business cycle. A cyclical sensitivity coefficient greater than 1.00 indicates that the tourism cycle is relatively larger than the GDP business cycle. For example, a cyclical sensitivity coefficient of 1.5 indicates that the cyclical deviation in the tourism indicator is 1.5 times the size of the cyclical deviation in GDP.

The Total Picture

Figure 7 shows that tourism expenditures cycle with the overall economy and that they are closely synchronized. Seventy-one percent of the cyclical variation in total tourism expenditures in Canada and 73% of the cyclical variation in the demand for total tourism commodities can be explained by the cyclical variation in GDP (Table 3).

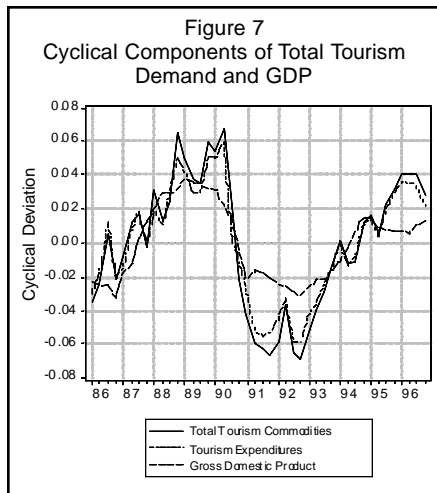
The cycle in tourism demand has greater amplitude than the cycle in GDP. As shown in Figure 7, when the Canadian economy experienced a 3.5% GDP

Table 3

Cyclical Properties of Tourism Demand and Supply Indicators

	Percent of Cyclical Variation Explained by GDP Cyclical Variation				Sensitivity Coefficients			
	Total Demand	Domestic Demand	Export Demand	Supply	Total Demand	Domestic Demand	Export Demand	Supply
Transportation	56	55	29	74	1.54	1.33	2.38	1.38
Passenger air transport	39	30	49	39	2.02	1.64	3.45	2.04
Vehicle rental	-	-	-	-	-	-	-	-
Vehicle repairs and parts	54	51	-	70	1.51	1.54	-	2.23
Vehicle fuel	-	-	-	15	-	-	-	0.48
Accommodation	33	21	-	32	0.88	1.58	-	0.94
Hotels	37	22	9	34	1.15	1.78	1.06	1.17
Motels	-	14	-	9	-	1.51	-	0.79
Food and beverage services	57	81	-	81	1.95	2.21	-	2.04
From accommodation services	27	50	39	39	1.72	1.94	1.91	1.91
From food and beverage services	67	78	-	81	2.04	2.34	-	2.13
Other tourism commodities	69	73	-	38	2.41	2.99	-	1.77
Recreation and entertainment	48	53	-	30	2.60	3.36	-	1.72
Travel agency services	57	58	-	57	2.96	3.09	-	2.96
Total tourism commodities	73	73	12	86	1.51	1.50	1.40	1.58
Total other commodities	18	10	-	n/a	0.40	0.36	-	n/a
Tourism expenditures	71	67	10	n/a	1.27	1.23	1.33	n/a

cyclical peak in 1989, the cyclical components of tourism demand peaked at 6% to 7%. The negative cyclical deviations in tourism demand in 1991 to 1992 are also larger than the negative cyclical deviations in GDP in Figure 7. In Table 3 the cyclical sensitivity coefficients for tourism expenditures in Canada and tourism demand for total tourism commodities are 1.27 and 1.51 respectively.



Since domestic expenditures represent approximately three quarters of total tourism expenditures during the 1986 to 1996 period, the cyclical story for domestic tourism demand is very similar to that found for total tourism demand in Canada. As shown in Table 3, 67% of the cyclical variation in domestic tourism expenditures and 73% of the cyclical variation in domestic demand for total tourism commodities can be explained by the cyclical variation in GDP. The cyclical sensitivity coefficients for domestic tourism expenditures and domestic demand for total tourism commodities are 1.23 and 1.50, again very similar to that found for total tourism demand.

A much different story emerges for tourism export demand. Tourism exports depend primarily on economic conditions outside of Canada, on the value of the Canadian dollar, and on irregular events. Non-trend movements in tourism exports tend to be dominated

by movements in the foreign exchange rate and special events such as Expos and Olympic games. Given the irregular path of tourism export expenditures (see Figure 4), it is probably a misnomer to refer to non-trend movements in tourism export demand as being 'cyclical.' The cyclical variation in Canadian GDP explains only 10% of the variation in export tourism expenditures, and only 12% of the variation in export demand for total tourism commodities.

The Canadian business cycle does have a very pronounced effect on the supply of total tourism commodities. Eighty-six percent of the variation in the cyclical component of the supply of total tourism commodities can be explained by the cyclical variation in Canadian GDP. The cyclical deviations in the supply of total tourism commodities are 1.58 times the size of the cyclical deviations in GDP. If the Canadian economy goes into a recession (as it did in 1991 to 1992), the decline in the supply of total tourism commodities substantially exceeds the decline in GDP (see Figure 5).

The Demand and Supply of Various Tourism Commodities

As shown in Table 3, there is considerable variation in the cyclical properties of different tourism commodities. There are three tourism commodities which have more than 50% of their cyclical variation in total tourism demand explained by the cyclical variation in GDP: food and beverage services from food and beverage establishments (67%), travel agency services (57%), and vehicle repairs and parts (54%). The cyclical sensitivity coefficients for these three tourism commodities are 2.04, 2.96, and 1.51 respectively. Two other tourism commodities have cyclical sensitivity coefficients for tourism demand in Canada above two, namely recreation and entertainment (2.60) and passenger air transport (2.02). Tourism demand in Canada for vehicle rentals, vehicle fuel, and motels is not significantly affected by cyclical swings in GDP.

The story is almost identical for tourism domestic demand. The tourism commodities which have more than 50% of their cyclical variation in domestic demand explained by the cyclical variation in GDP are food and beverage services from food and beverage establishments (78%), travel agency services (58%), recreation and entertainment (53%), and vehicle repairs and parts (51%). The cyclical sensitivity coefficients for these four tourism commodities are 2.34, 3.09, 3.36, and 1.54 respectively; in each case the cyclical sensitivity coefficient for domestic tourism demand is a little higher than the cyclical sensitivity coefficient for total tourism demand in Canada.

As discussed above, tourism export demand is dominated by irregular movements associated with changes in foreign exchange rates, foreign economic conditions, and special events. There are only three tourism export commodities which are significantly affected by cyclical movements in Canadian GDP and in each case the cyclical component of GDP explains a relatively small percentage of the cyclical variation in tourism export demand (9% for hotels, 39% for food and beverage services from accommodation establishments, and 49% for passenger air transport).

The cyclical properties for the supply of various tourism commodities presented in Table 3 are quite similar to the cyclical properties for demand. As found for tourism demand, the three tourism commodities which have more than 50% of their cyclical variation in supply explained by the cyclical variation in GDP are food and beverage services from food and beverage establishments (81%), travel agency services (57%), and vehicle repairs and parts (70%). The cyclical sensitivity coefficient for each of these three tourism commodities is greater than two, with the supply of travel agency services again being most sensitive (with a cyclical sensitivity coefficient of 2.96). Passenger air transport again has a cyclical sensitivity coefficient greater than two.

Employment Generated by Tourism Demand

As shown in Table 4, there is also a strong cyclical element in tourism employment. The cyclical variation in Canadian GDP explains 79% of the cyclical variation in tourism employment in tourism industries and 78% of the cyclical variation in total tourism employment generated from tourism. The cyclical deviation in tourism employment in tourism industries and the cyclical deviation in total tourism employment generated from tourism are 1.28 and 1.29 times the size of the cyclical deviation in GDP.⁴

Employment levels in some tourism industries are more sensitive to the Canadian business cycle than in other tourism industries. In the food and beverage industry the cyclical sensitivity coefficient is only 1.02, indicating that the cycle in tourism employment is similar in size to that found for the overall Canadian economy. In the accommodation industry, the 1.75 cyclical sensitivity coefficient indicates that tourism employment cycles are 75% larger than cycles in the overall Canadian economy. In the passenger air transport industry, which accounts for almost one-half of tourism employment in the total transportation industry, the cyclical sensitivity coefficient is 1.73,

almost double that found for the total transportation industry. Finally, the travel agency industry has the highest tourism employment cyclical sensitivity coefficient. Cyclical tourism employment deviations in travel agencies are 2.58 times the size of the cyclical deviations in the overall economy.

Summary and Conclusions

Tourism is a leading growth sector and job creator in the Canadian economy. Over the first quarter of 1986 to the fourth quarter of 1996, total tourism expenditures in Canada (measured in constant 1986 dollars) increased by 25.5%. This increase in tourism expenditures was accompanied by a 22% increase in person-years of tourism employment in tourism industries, an increase which is almost twice as large as the 12% increase in person-years of employment in the entire Canadian business sector.

While tourism is a leading growth sector in the Canadian economy, there is considerable variation in growth rates within the tourism sector. The high growth rate in tourism expenditures and tourism employment has been largely fuelled by a tremendous surge in tourism export demand, particularly since 1992. Tourism export expenditures increased by 58% from the first quarter of 1986 to the fourth quarter of 1996, more than double the increase in GDP.

Turning to specific tourism commodities, during the 1986 to 1996 period the estimated trend increases for the major components of tourism demand in Canada are 8.21% for transportation, 39.10% for accommodation, 9.64% for food and beverage services, and 41.70% for other tourism commodities. The variation in estimated trend increases is even larger when one compares various tourism commodity sub-components. A huge 224.60% trend increase in tourism demand for travel agency services leads the pack, followed by a 42.94% trend increase in tourism demand for hotels. While there is a 39.10% trend increase in tourism demand for accommodation, tourism demand for food and beverage services from accommodation establishments has an estimated trend decrease of 14.60%. The estimated trend increases for the components and sub-components of tourism export demand are, with one exception (vehicle repairs and parts), larger than the estimated trend increases for tourism domestic demand.

The estimated trend increase in tourism employment in tourism industries during the 1986 to 1996 period is 12.72%. This 12.72% trend increase in tourism employment exceeds the estimated trend increase in employment in the Canadian business sector by almost 4 percentage points. The two tourism industries with the largest estimated trend employment increases are vehicle rental agencies (64.28%) and travel agencies (54.30%).

There are very pronounced cycles in tourism demand, the supply of tourism commodities, and tourism employment. Seventy-three percent of the cyclical variation in tourism demand in Canada and 86% of the cyclical variation in the supply of total tourism commodities can be statistically explained by the cyclical variation in Canadian GDP. The cyclical variation in tourism demand in Canada and in the supply of total tourism commodities is about 1.5 times the size of the cyclical variation in GDP. However,

⁴ Unlike the cycles for tourism demand and supply, the tourism employment cycle is not synchronized with the GDP business cycle. Only one-third of the cyclical sensitivity coefficient for employment in all industries generated from tourism demand is attributable to the current cyclical GDP component.

Table 4

Cyclical Properties of Tourism Employment Indicators

	Percent of Cyclical Variation Explained by GDP Cyclical Variation	Sensitivity Coefficient
Transportation	53	0.90
Air transport	65	1.73
Taxicabs	12	1.08
Vehicle rental and leasing	32	1.03
Accommodation	65	1.75
Food and beverage services	48	1.02
Other tourism commodities	55	1.73
Recreation and entertainment	38	1.49
Travel agency	54	2.58
Total tourism industries	79	1.28
Other industries	71	1.39
Tourism employment	78	1.29

the cyclical variation in Canadian GDP explains only 12% of the variation in tourism export demand; tourism export demand depends primarily on economic conditions outside of Canada, the value of the Canadian dollar, and on irregular events.

There is considerable variation in the cyclical properties of different tourism commodities. Eighty-one percent of the cyclical variation in the supply of food and beverage services can be explained

by the cyclical variation in GDP, compared to only 32% for the supply of accommodation. The cyclical sensitivity coefficients range from over three to less than one-half.

Many tourism commodities are very sensitive to cyclical movements in GDP. In particular, the Canadian business cycle hits passenger air transport, food and beverage services, recreation and entertainment, and travel agency services with a double whammy effect

(most of the cyclical sensitivity coefficients for these four tourism commodities exceed two). On the other hand, vehicle rentals, vehicle fuel, and motel accommodation appear to be relatively immune from the vicissitudes of the Canadian business cycle. Very little of the cyclical variation in these three tourism commodities can be explained by the cyclical variation in GDP.

Finally, the cyclical variation in Canadian GDP explains 79% of the cyclical variation in tourism employment in the tourism industry, and cyclical deviations in tourism employment are 1.28 times larger than the cyclical deviation in GDP. At the disaggregated level, the cyclical sensitivity coefficients are largest for the passenger air transport industry (1.73), the accommodation industry (1.75) and the travel agency industry (2.58).

National Tourism Indicators Revisions to benchmarks, 1988 and 1992

In addition to the normal revisions of the data, a number of changes are introduced with this release of the *National Tourism Indicators* (NTI). The NTI are now benchmarked to the new estimates of the 1992 Tourism Satellite Account (TSA) and revised estimates of the 1988 TSA. With the new and revised benchmark data, the NTI better reflect the evolution of tourism since 1986. The historical estimates presented in this issue thus replace those published last year. Some additional information is presented in the tables as well.

The tables on tourism demand in Canada, tourism domestic demand and tourism exports now include a new category of spending, called *total other commodities*. This category includes the purchase of non-tourism commodities by Canadian and non-resident visitors in Canada, including groceries, beer, wine and liquor from stores, pre-trip purchases such as camping equipment and luggage, and other commodities such as clothing and souvenirs. It also includes urban transit services and parking services. These two types of services, which have only a small portion of their demand coming from tourism (less than 6%), were classified as tourism commodities in the 1988 TSA and included in the category *other transportation* in previous releases of the NTI. They are now re-classified as non-tourism commodities.

A new aggregate, called *tourism expenditures*, is shown at the bottom of each table on tourism demand. This is an estimate of the total spending by Canadian and non-resident visitors on tourism and non-tourism commodities. In addition, two new aggregates are shown in the tables on Employment Generated by Tourism. One shows the direct employment attributable to tourism within non-tourism industries, such as retail stores, while the other shows the direct employment generated by tourism in both tourism and non-tourism industries. With the addition of these new categories, the presentation of the NTI includes the main elements of tourism demand and employment that will be presented in the upcoming release of the 1992 and revised 1988 TSA.

Method

Estimates for the trend in each tourism indicator are produced using the 'least squares' regression technique. This statistical technique determines the 'best' trend line which can be fitted through all observations; it is 'best' in the sense that it produces the least sum of squared residuals, the deviations between the actual observations and the trend line. The trend increase in each tourism indicator is calculated by dividing the last observation on the trend line by the first observation on the trend line. The cyclical component, defined as the actual observation minus the trend line divided by the trend line measures the deviation of the actual quarterly observation (seasonally adjusted) from the trend line. The trend and cyclical components for each National Tourism Indicator are compared to the trend and cyclical components of the overall Canadian economy, using Gross Domestic Product and employment data.

Statistical estimates for the trend component of a time series are sensitive to the cyclical characteristics in the data. In particular, an incomplete 'cycle' of data will bias the estimate for the trend. For example, if the data begin in a boom and end in a recession, trend estimates will be biased downwards. To obtain an unbiased estimate of the trend component, the data should begin and end at roughly the same point in the business cycle. Both the beginning and end points of the eleven-year period used in this study occur in the recovery phase of a Canadian business cycle. In both 1986 and 1996 the Canadian unemployment rate was approximately 9 1/2%, mid-way between a cyclical peak and cyclical trough. While this particular eleven year period contains more than one complete business cycle, the extra years are mid-recovery years (not a cyclical peak or trough, which would bias the trend estimate).

References

- Bank of Canada. *Bank of Canada Review*. Ottawa: Bank of Canada.
- Beaulieu-Caron, Lise. 1997. "National Tourism Indicators: A New Tool for Analysing Tourism in Canada." *Travel-log* (Statistics Canada Catalogue no. 87-003-XPB). Ottawa: Minister of Industry, 16, 1 (Winter 1997): 1-6.
- Lapierre, Jocelyn and Duane Hayes. 1994. *The Tourism Satellite Account*. Technical series, No. 31. Ottawa: National Accounts and Environment Division, Statistics Canada.
- Statistics Canada. 1996. *Guide to the National Tourism Indicators: Sources and Methods* (Statistics Canada Catalogue no. 13-594-GPE). Ottawa: Minister of Industry (August 1996): 1-46.
- Statistics Canada. 1996. *National Tourism Indicators: Historical Estimates 1986 to 1995* (Statistics Canada Catalogue no. 13-220-XPB). Ottawa: Minister of Industry (June 1996): 1-153.
- Statistics Canada. 1997. *National Tourism Indicators: Historical Estimates 1987 to 1996* (Statistics Canada Catalogue no. 13-220-XPB). Ottawa: Minister of Industry (June 1997): 1-159.
- Statistics Canada. 1997. *National Tourism Indicators: Quarterly Estimates, First Quarter 1997* (Statistics Canada Catalogue no. 13-009-XPB). Ottawa: Minister of Industry (June 1997): 1-29.
- Statistics Canada. *Traveller accommodation statistics* (Statistics Canada Catalogue no. 63-204-XPB). Ottawa: Minister of Industry.



Characteristics of International Travellers First Quarter 1998

Americans made a record 1.8 million overnight trips to Canada during the first quarter of 1998, up 6.5% over the same period in 1997. This increase in American travel to Canada is directly related to the increased value of the American dollar compared with the Canadian dollar. The value increased 5.3% between the first quarter of 1997 and the first quarter of 1998.

Increase in overnight trips to Canada benefited Alberta and British Columbia

Benefiting from a favourable exchange rate, Americans stayed a little longer and also spent more per trip in the first quarter of 1998 than they did in the same period in 1997. As a result, they injected \$135 million more in the Canadian economy in the first three months of 1998 compared with the same period last year – a jump of 23.3%.

This surge in U.S. spending was most profitable to British Columbia, where spending by Americans jumped 43.8% to \$243 million. Tourism spending in Alberta went up 21.0% to \$59 million.

The most frequently reported reasons for Americans visiting Canada – pleasure travel and trips to visit friends and relatives – both increased (7.9% and 6.8% respectively) in the first quarter. On the other hand, business travel, which is less discretionary than pleasure travel and, therefore, less affected by exchange rate fluctuations, increased only slightly (1.3%).

Air travel, which has risen steadily since the implementation of the Open Skies agreement in 1995, increased 8.9%. Meanwhile, auto travel was up 5.7% – the third consecutive quarterly increase. All other modes, which include bus, train, boat and pedestrian traffic, increased by 2.8% over the same quarter last year.

California and Mexico most popular among Canadians

Canadians made 3.0 million overnight trips to the United States during the first quarter of 1998, a sharp 9.9% drop from the same period last year. The most popular American destinations experienced decreases in visits except California, where the number of Cana-

dians visiting increased by 6.0%. Florida remains the most popular destination for Canadians with 804,000 visits. Canadians also spend the most money in this state (\$751 million). The average trip duration in Florida was 14.5 nights compared with an average of 9.5 nights in California.

The top overseas destination for Canadians for the first quarter of 1998 was Mexico, followed by the United Kingdom. As well, Canadian travel to such traditional destinations in Europe as France, the Netherlands and Switzerland showed strong increases.

Overseas travel down

Compared with 1997, overseas travel to Canada decreased 13.3% during the first

Places most visited by Canadians for an overnight stay

	First Quarter		% change
	1997	1998	
	(thousands)		
United States	5,024	4,515	-10.1
Florida	956	804	-15.9
New York	403	295	-26.8
California	273	290	6.0
Washington	328	266	-19.0
Nevada	237	233	-1.6
Overseas	1,480	1,464	-1.1
Mexico	315	333	5.8
United Kingdom	118	115	-2.5
Dominican Republic	78	89	14.2
France	50	80	57.9
The Netherlands	17	24	38.9
Switzerland	17	20	14.1

Number of trips and spending of overseas travellers in Canada

	Trips			Spending		
	First Quarter			First Quarter		
	1997	1998	% change	1997	1998	% change
	(thousands)			(millions of dollars)		
Total trips	622	521	-16.2	568	544	-4.2
Same day	50	25	-48.3	1.2	0.8	-35.3
Overnight	572	496	-13.3	567	543	-4.2
– Direct	345	333	-3.6	417	423	1.3
– Via U.S.	227	164	-28.0	150	120	-19.5
– Land	113	58	-49.0	37	23	-37.1
– Other	114	106	-7.1	113	97	-13.7

quarter of 1998. Overseas visitors spent \$24 million less in Canada during the first quarter of 1998, compared with the same period in 1997. All provinces experienced decreases in spending by overseas visitors except British Columbia (up 18.4% or \$32 million), Alberta (up 19.9% or \$14 million) and Quebec (up 9.4% or \$9 million) respectively for these provinces.

Spending up slightly by overseas travellers entering Canada directly

The proportion of overseas travellers who entered Canada directly compared with entry to Canada via the United States increased from 62% to 67% in the first quarter of 1998, compared with the same period last year. The economic impact of this increase is important for Canada because these travellers stay longer than those who entered via the United States and spend more in Canada per trip.

Overseas tourists who entered Canada by land via the United States dropped nearly 50% in the first quarter of 1998. However, the 333,000 overseas travellers who entered Canada directly in the first quarter of 1998 spent \$423 million, up 1.3% from the same period in 1997.

and June, on the heels of record spending by American travellers in Canada.

Overall in the second quarter of 1998, travellers spent a record \$3.4 billion in Canada, while Canadians spent \$3.9 billion in other countries. The resulting difference (\$488 million) brought the travel deficit to its lowest level since early 1988 (\$364 million).

Canada's travel deficit with the world has been cut almost in half within less than a year. The second-quarter deficit was well below the most recent peak of \$943 million in the third quarter of 1997.

By far, the major factor has been spending by Americans in Canada, which has been increasing steadily as the Canadian dollar declined in value against the American dollar. During June alone, Americans made a record number of overnight trips to Canada.

Travel deficit with the United States lowest in 10 years

American spending in Canada reached a record \$2.2 billion during the second quarter of 1998, up 3.6% from the previous quarter. At the same time, spending by Canadians in the United

States remained relatively constant at just under \$2.5 billion.

This situation produced the lowest travel deficit with the United States in 10 years (\$275 million). This deficit had peaked at \$1.9 billion during the last three months of 1991.

During the second quarter of 1998, the Canadian dollar reached an all-time low compared with the American dollar, slipping below US\$0.69.

Deficit increased between Canada and overseas nations

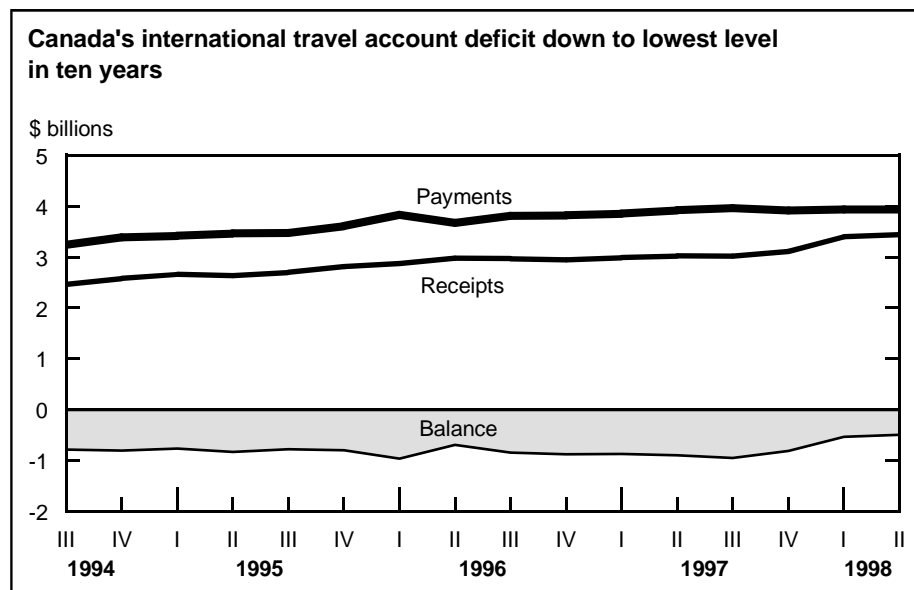
During the second quarter, Canadians spent more in countries other than the United States than residents of these countries spent in Canada. The result was a deficit of \$212 million, up 7.1% from the previous quarter.

Spending by overseas residents travelling to Canada was down 2.3% from the previous quarter to \$1.2 billion, the lowest level since the third quarter of 1995. Canadian spending in countries other than the United States declined 1.1% from the first quarter to \$1.5 billion.



International Travel Account Second Quarter 1998 (preliminary)

The quarterly travel deficit fell to its lowest level in a decade between April





Travel Price Index Second Quarter 1998

Note to readers

Changes to the Travel Price Index

Several changes to the Travel Price Index (TPI) were made starting with the data for the first quarter of 1998.

The time base used to present the TPI has been updated from 1986=100 to **1992=100**. Statistics Canada has moved all of its price indexes and constant dollar series to the 1992 time base.

Expenditure weights for 1996 replaced the 1992 weights. Finally, modifications were made to the **commodity classification** system. Most notably, the aggregate "purchase and rental of automotive vehicles" was changed.

Changing CPI time bases and expenditure weights are separate exercises. The introduction of new expenditure patterns into the TPI is done in a way which has no effect on indexes published prior to the first quarter of 1998.

The Travel Price Index (TPI) is an aggregate index of the goods and services used by travellers in Canada. Price movements are derived from the detailed Consumer Price Index (CPI) series.

A technical report on the Travel Price Index is available from the Tourism Statistics Program at (613) 951-1673.

TPI up 2.7 percent from the same period last year

In the second quarter of 1998, consumers saw an increase of 2.7 percent in the prices of goods and services included in the Travel Price Index, compared to the same period last year. Driving this increase were rises of 8.2 percent in the cost of inter-city transportation, of 4.2 percent in the cost of audio discs and tapes, and finally of 3.7 percent in traveller accommodation costs. The cost of tobacco products and smokers' supplies, and of local and commuter transportation also rose. Finally, in the second quarter of 1998, it cost travellers less for the rental and the operation of automotive vehicles and for photographic equipment.

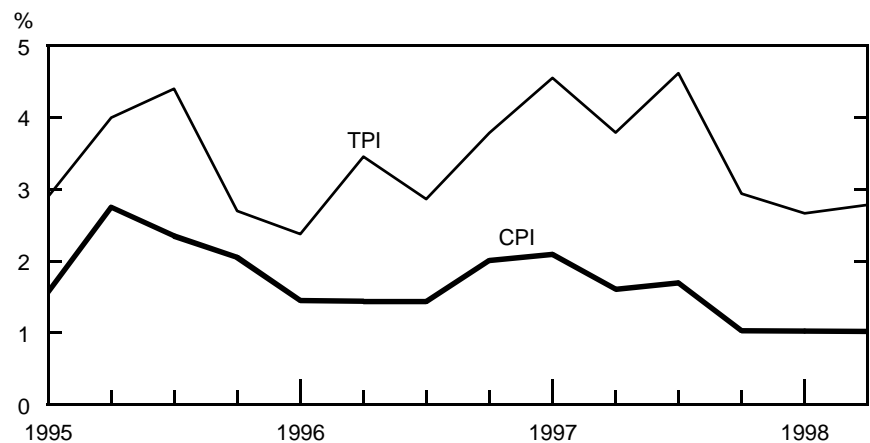
In comparison, the Consumer Price Index rose 1.0 percent in the second quarter of 1998 over the same period last year.

TPI up 2.2 percent from last quarter

The Travel Price Index rose 2.2 percent in the second quarter of 1998 compared with the previous quarter. A strong rise in traveller accommodation rates contributed largely to this increase. Traveller accommodation rates climbed a sharp 15.3 percent in the second quarter of 1998. High occupancy rates as a result of a number of large conventions in major cities contributed to the higher rates. In addition, the Canadian hotel industry profited from a weak Canadian dollar in attracting U.S. travellers and from a strong North American economy. Consumers also spent 2.4 percent more for footwear but benefited in declines in clothing, photographic equipment and inter-city transportation costs.

In the second quarter of 1998, the cost of all goods and services included in the Consumer Price Index was up 0.3 percent over the previous quarter.

Quarterly percentage change in TPI and CPI from preceding year



Source: Tourism Statistics Program

National Tourism Indicators First Quarter 1998

Tourism demand

In the first quarter of 1998, tourism spending (tourism demand) in Canada was up 4.4 percent from the first quarter of 1997, reaching \$8.8 billion. All tourism goods and services sectors recorded increases.

Weaker non-resident spending, however, contributed to a slowdown in demand. During the first quarter of 1998, spending by Canadians was the main source of growth, whereas outlays by foreigners had dominated in the previous quarter.

Strong domestic demand

Spending by Canadian tourists in their own country was up 4.8 percent from the first quarter of 1997 to \$7.1 billion in the first quarter of 1998. Growth in spending was recorded in all of the tourism goods and services sectors, especially transportation (7.0 percent).

Continued weakness in the dollar against its American counterpart contributed to fewer trips south of the border. The fewer trips abroad coupled with generally favourable economic conditions in Canada, translated into relatively strong domestic demand for tourism.

After adjusting for inflation and seasonal variation, domestic spending advanced 0.8 percent between the fourth quarter of 1997 and the first quarter of 1998. This represents a similar gain to that between the third and fourth quarters, and the fifth consecutive quarterly increase.

Slower foreign spending growth

In the first quarter of 1998, foreign visitors spent \$1.7 billion, a modest increase of 2.7 percent over the same quarter last year. This is the lowest year-to-year increase since the first quarter of 1993. The slowdown of growth was noticeable across all major categories of tourism spending.

Benefiting from a cheap Canadian dollar, Americans took 5.6 million same-day trips and 1.8 million visits of one or

more nights, up 7.0 percent and 5.7 percent respectively from last year. In contrast, there was a substantial decline in the number of trips by visitors from countries other than the United States. For instance, some half a million visitors from outside the United States came to Canada in the first quarter - the lowest level since the first quarter of 1995. Also, the number of visitors from the Asia-Pacific region fell by more than

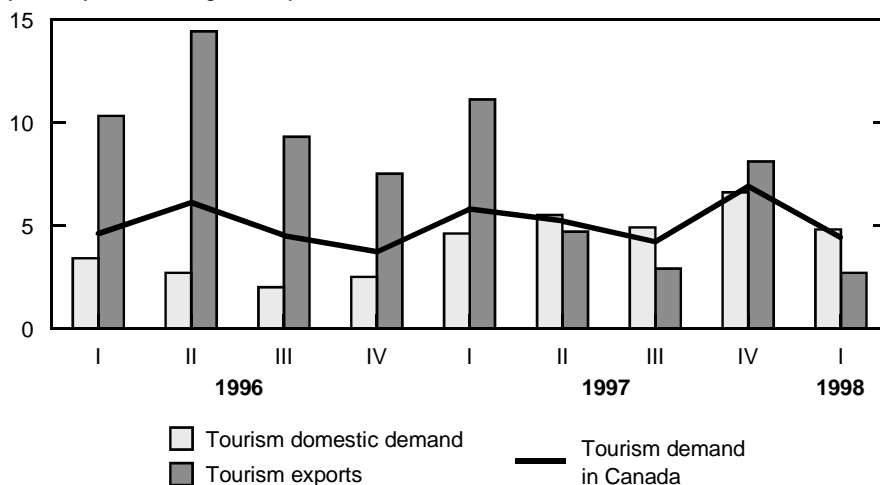
30 percent compared to last year. The economic turmoil in that part of the world possibly explains this situation.

Tourism creates more jobs

Employment generated by tourism reached 490,000 in the first quarter of 1998, up 4.7 percent from a year ago. Employment was up in all major categories, with a significant increase in transportation.

Domestic demand main source of growth

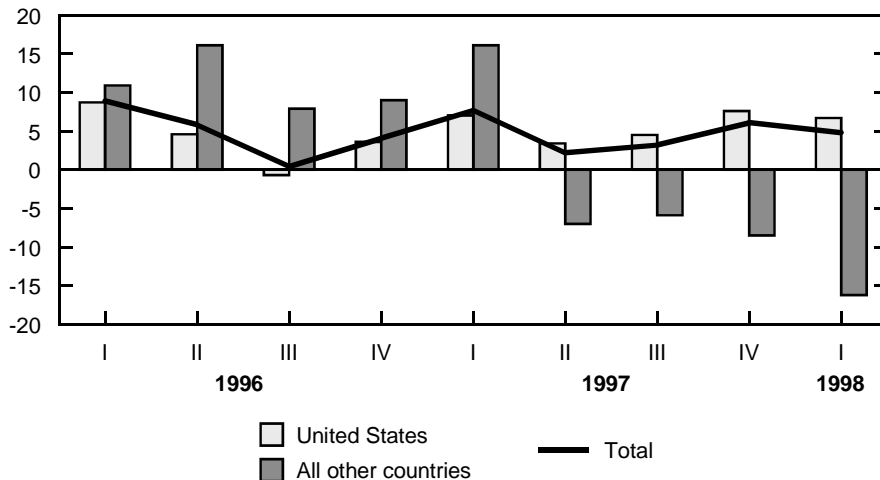
year-to-year % change, unadjusted data



Source: Statistics Canada, National Tourism Indicators

Number of U.S. visitors remains strong: Overseas market declines

year-to-year % change, unadjusted data



Source: Statistics Canada, National Tourism Indicators



	Second Quarter		% Change
	1997	1998	
FOREIGNERS TO CANADA (000s)			
From United States	10,467	11,047	5.5
One-or-more-night trips	3,480	3,871	11.2
- By auto	2,118	2,367	11.8
From Overseas	1,225	1,152	-6.0
One-or-more-night trips	1,142	1,080	-5.5
Top Seven Countries:			
United Kingdom	201	216	7.5
Japan	149	129	-13.0
Germany	100	101	0.8
France	112	96	-14.0
Australia	43	42	-1.6
Hong Kong	35	41	19.6
Taiwan	43	36	-16.9
CANADIANS OUTSIDE CANADA (000s)			
To United States:	12,945	11,622	-10.2
One-or-more-night trips	3,721	3,532	-5.1
- By auto	2,210	2,034	-7.9
To Overseas (one or more nights)	871	927	6.5
INDUSTRY			
Airline passengers (Level I) (000s)	6,097	6,433	5.5
Airline passenger-km (Level I) (000,000s)	15,682	16,614	5.9
PRICES 1992=100 (not s.a.)			
Travel Price Index	114.9	118.1	2.8
Consumer Price Index	107.5	108.6	1.0
- Restaurant meals	107.8	110.0	2.0
- Inter-city transportation	137.2	148.5	8.2
- Rental of automobiles	114.3	113.0	-1.1
- Gasoline	107.9	100.2	-7.1
ECONOMIC 1992=100			
Gross Domestic Product (s.a.) (000,000s)	688,878	708,620	2.9
- Amusement and recreation (000,000s)	7,189	7,505	4.4
- Accommodation and food services (000,000s)	18,296	19,124	4.5
Personal disposable income per capita (s.a.)	17,359	17,428	0.4
LABOUR (000s)			
Labour force (s.a.)	15,326	15,574	1.6
Unemployed	1,433	1,305	-9.0
Employed	13,893	14,269	2.7
- Accommodation and food services (not s.a.)	904	916	1.3
EXCHANGE RATES (in Canadian dollars)			
American Dollar	1.3861	1.4467	4.4
British Pound	2.2676	2.3927	5.5
Japanese Yen	0.0116	0.0107	-8.0
German Mark	0.8086	0.8069	-0.2
French Franc	0.2398	0.2407	0.4

(s.a.) seasonally adjusted.