

Research Paper

Income and Expenditure Accounts Technical Series

The 1997-2003 Revisions of the National Tourism Indicators

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The 1997-2003 Revisions of the National Tourism Indicators

This article explains the new revision policy of the National Tourism Indicators. Implementation of this new policy resulted in revisions to the NTI from the first quarter of 1997 through to the fourth quarter of 2003. The article describes the main sources of revision, and summarizes the effects on the NTI. While the revisions resulted in higher estimates of tourism demand, the effects on growth (adjusted for seasonality and inflation) were mixed. Several tables of results are provided.

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Symbols

The following standard symbols are used in Statistics Canada publications:

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

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The 1997-2003 Revisions of the National Tourism Indicators¹

1. Introduction

With the first quarter 2004 release of the National Tourism Indicators (NTI), a new revision policy, adapted from the System of National Accounts(SNA), is now in place. This policy calls for "annual revisions" once a year at the time of the first quarter release. Henceforth, NTI source data that get revised or come available several years after the fact will be incorporated on a regular basis allowing for systematic improvements to the time series.

Implementation of this new policy has resulted in revisions to the NTI from the first quarter of 1997 through to the fourth quarter of 2003.² While the revisions have resulted in higher estimates of tourism demand, the effects on growth (adjusted for seasonality and inflation) are mixed (see Table 1).

The revised estimates continue to show a downturn of tourism demand in the second quarter of 2001, although not as steep as previously published. The third quarter of 2001, which included 9/11, shows more of a decline than previously estimated. Also, a much sharper decline is indicated in the aftermath of 9/11. Tourism demand is now estimated to have fallen 2.6% in the fourth quarter of 2001, versus a previously published 1.3% drop. The rebound in the first quarter of 2002, on the other hand, is now a much stronger 1.9%, nearly double the previous estimate.

The downturn of tourism demand in the first quarter of 2003, with the stronger dollar, the imminent war in Iraq and the outbreak of SARS, is now estimated to be a sharper -1.9%, versus a previously published -1.3%. The second quarter, which bore the brunt of the effects of SARS, continues to show a steep decline in tourism spending. The revised estimate, at -4.6%, is similar to the drop indicated previously. As well, the rebound in the third quarter is now estimated to be somewhat stronger, while a robust advance continues to be indicated for the fourth quarter of 2003.

To outline the remainder of the text, the new revision policy is described more fully in the section 2. The following section describes the main sources of revision, while section 4 summarizes the revisions to the NTI on an annual basis. Several tables of results are then provided.

2. The new NTI revision policy

The new NTI revision policy is adapted from the one followed for the quarterly national accounts. ³ That revision policy governs four types of revisions: current, annual, historical and rebasing. Each of these is described below.

2.1 Types of revision

During the current reference year, estimates for any quarter are subject to revision at any subsequent quarter. For instance, a first quarter estimate is revised on release of the second, third and fourth quarter estimates for the same year. Revisions to estimates during the current reference year are called current revisions. They allow improvements to estimates for past quarters during the current year through incorporation of the most up-to-date information available (including, for example, revisions to source data as a result of late reporting).

At the time of a first quarter release, all estimates for a fixed number of years back from the current year are subject to revision. This "annual revision" allows the incorporation of the most up-to-date information from censuses, annual surveys, taxation statistics, public accounts, etc, which become available well after the fact. Once an estimate has gone through the cycle of annual revisions, it is considered "final" and is no longer subject to the annual revision process.

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^{1.} This article was prepared by staff of the Research and Development Projects and Analysis Section of the Income and Expenditure Accounts Division at Statistics Canada. For further information, please call 613-951-3640 or e-mail: <u>iead-info-dcrd@statcan.ca</u>. We would like to thank the Canadian Tourism Commission who provided funding for the project.

^{2.} The NTI for 1997 and 1998 are now deemed "final". That is, they are no longer subject to annual revision.

^{3.} For more information on the SNA revision policy see "The 2000-2003 revisions of the Income and Expenditure Accounts," Canadian Economic Accounts Quarterly Review, first quarter 2004, Statistics Canada Catalogue no. 13-010-XIE (available for free at http://www.statcan.ca).

Historical revisions, of the sort carried out in the NTI with the third quarter of 2002, also provide the occasion to bring in new data. However, they are mainly for the purpose of implementing new concepts and definitions (as required by international accounting guidelines), new and refined methods and revamping of estimation systems. Historical revisions are normally carried out once a decade, and they typically result in changes to entire time series.

Rebasing of constant price series, as with the third quarter 1997 release of the NTI, are normally carried out twice a decade, usually at the time of historical revisions and mid-way between. Rebasing is done to remove bias in measures of inflation-adjusted growth as relative prices in the economy evolve away from those of the base year. Rebasing involves revisions only to price indexes and constant price aggregates, leaving aggregates at current prices unaffected.

2.2 Why the new NTI revision policy?

The NTI have always been, and under the new revision policy will continue to be, subject to both current and historical revisions as well as rebasing. The main difference is that the NTI are now subject to annual revisions. This will help to improve the reliability and accuracy of the time series.

Under the former NTI practice, revisions to source SNA and other data (such as the Canadian Travel Survey and International Travel Survey) that became available more than three months after the reference year could not be incorporated, at least not on a regular basis. This resulted in the NTI being essentially time series of preliminary estimates that eventually departed from their underlying indicators until historical revisions brought them back in line.

The new NTI revision policy rectifies this situation, by enabling regular and systematic incorporation of new and revised data for past reference periods. It also sets the stage for more regular benchmarking to updated Tourism Satellite Accounts (TSA).

2.3 Length of period open for revision

Formerly, the NTI for any year were considered "final" at the time of the fourth quarter release for that year. With the new policy, NTI estimates will only be considered "final" after going through the cycle of annual revisions. Normally, the cycle comes to an end when final annual benchmarks are incorporated. In the quarterly national accounts, this occurs when final Input-output (I/O) benchmarks are brought in. These become available close to four years after the fact yielding a four-year window for data revisions.

The revision window for the NTI is wider, however, for a number of reasons. First, the key source of final benchmarks is the Tourism Satellite Account. It takes close to a year to update the TSA on the basis of final I/O tables and to then incorporate the new benchmarks into the NTI. As a result, the window for revision must be at least five years. Second, the TSA, over the last few years at least, has been done on a biennial basis. Incorporation of updated benchmarks every two years necessitates revisions to the year between the benchmarks. This extends the window for revision to at least six years. Last, given the new policy, the work associated with annual revisions must be completed in a relatively short time frame leading up to a first quarter release. If a TSA is not ready in time, it can only be incorporated at the next annual revision. In this case, the revision period would be extended beyond six years.

With this first quarter 2004 release, the NTI are revised back to first quarter 1997. All of the above factors contributed to this fairly lengthy seven-year revision period. With the next annual revision, scheduled for first quarter 2005, the window will be narrowed to six years (1999 to 2004) as a result of improved timing of the next TSA (2000) update.

3. Sources of revision

With the 2004 annual revision of the NTI, several updated data sources have been incorporated. These are described below.

The NTI are now benchmarked to the most recent **Provincial and Territorial Tourism Satellite Account** (PTSA)⁴, resulting in new levels of tourism supply, demand, Gross Domestic Product (GDP) and employment for 1998.⁵ Final **Input-output (I/O) tables** for 1999 and preliminary tables for 2000 were used along with tourism ratios from the PTSA to establish new annual levels for the NTI for these years. I/O tables for 1997 along with ratios from the last two PTSAs were used to establish new 1997 levels.

System of National Accounts (SNA) quarterly indicators (mainly components of consumer spending and GDP by industry), revised for 1999 to 2003, have been incorporated.⁶ This affected the quarterly movements of the NTI for 1999 and 2000, and quarterly movements and annual levels for 2001 to 2003.

New quarterly *International Travel Survey* (ITS) data for 2002, with more detailed commodity breakdowns, were used to split out tourism exports. ITS data revisions for 2003 were also incorporated. Last, seasonal patterns of tourism spending in the NTI were updated to reflect the 2002 and 2003 *Canadian Travel Survey* (CTS) results. This affected the quarterly NTI,⁷ but not the annual levels.

4. Impact of the revisions on the NTI 1997-2003

It might be noted that the revisions to the NTI reported below tend to be larger than those found in a recent study of NTI data revisions from 1997 to 2001.⁸ That study focused on current revisions (i.e., revisions made during the current reference year). Annual revisions are typically larger because they involve incorporation of annual survey, I/O and/or TSA benchmarks.

In the case of tourism demand (unadjusted for seasonality and inflation) the mean current revision to the quarterly estimates from 1997 to 2001 was \$105 million. That is, the revised estimates for the first through third quarters of the year, made at the time of a fourth quarter release, on average were \$105 million (or 0.8%) higher than at the time of first release. The mean annual revision to the quarterly estimates of tourism demand from 1997 to 2003 is \$236 million. In other words, with this NTI release, the estimates from the first quarter of 1997 to the fourth quarter of 2003 are now on average \$236 million (or 1.9%) higher than they stood at the fourth quarter of 2003.

In might also be noted that these first annual revisions of the NTI are considerably larger than revisions to national accounts estimates of quarterly Gross Domestic Product (GDP). For instance, annual revisions to GDP (adjusted for seasonality and inflation) with the first quarter of 2004, ranged between -0.2% and +0.4%.⁹ For comparison, annual revisions to tourism GDP with this NTI release range between -1.8% and 2.4%.

This is not too surprising, however, as tourism GDP is a much smaller aggregate than economy-wide GDP; it made up 2.0% of overall GDP at basic prices in 2003. It lacks major components like consumer spending (or labour income) that tend to be very stable and little revised. And it consists of considerably fewer components allowing less room for offsetting effects of revisions when its parts are added together. In addition, tourism is simply a more volatile phenomenon than the economy as a whole¹⁰ so that early indicators are more likely to be revised, and to a larger degree.

Barber-Dueck, Conrad, and Demi Kotsovos, "The Provincial and Territorial Tourism Satellite Accounts for Canada, 1998," Income and Expenditure Accounts Technical Series, Statistics Canada Catalogue no. 13-604-MPE no. 40, June 2003.

^{5.} In order to preserve continuity of the time series, for some industries (passenger air and bus transportation and accommodation), the NTI were only partially adjusted towards the new 1998 PTSA employment estimates. In these cases, full benchmarking to the PTSA would have introduced marked breaks. The full adjustments will be made at the time of the next historical revision of the NTI.

^{6.} These revised SNA indicators reflect new annual 2001 and 2002 benchmarks from various sources including, notably, the Survey of Household Spending, the Annual Survey of Traveller Accommodation and the Annual Surveys of Service Industries.

^{7.} For instance, the revisions imply more seasonality in tourism spending, as revisions to first quarters tend to be the smallest, while revisions to third quarters tend to be the largest.

^{8.} See "A study of data revisions to the National Tourism Indicators," in National Tourism Indicators, Fourth quarter 2003, Statistics Canada Catalogue no. 13-009, March 2004.

^{9.} For more information on the recent round of revisions to the quarterly GDP estimates see "The 2000-2003 revisions of the Income and Expenditure Accounts," cited earlier.

^{10.} See David Wilton, Recent Developments in the National Tourism Indicators, Research Report for the Canadian Tourism Commission, forthcoming.

4.1 Revisions to tourism demand

With this round of annual revisions, tourism spending in 2003 has been raised by 2.4%, from \$50.9 billion to \$52.1 billion (at current prices). Estimates for all other years under revision (see Table 2) are now between 0.8% and 2.9% higher.

Most of the upward revisions are attributable to higher tourism domestic demand in the 1998 PTSA. Domestic demand is now estimated at \$30.4 billion in 1998, 4.3% higher than previously published in the NTI. This higher level is carried forward, raising the NTI estimates through to 2003. In contrast, incorporation of the PTSA left tourism exports in 1998 unchanged, at \$15.5 billion. Tourism exports have been revised down between 1.6% and 2.0% of previously published NTI levels for 1999 through 2001. They have been raised by 0.4% for 2002 and by 1.0% for 2003.

The impact on annual growth rates of tourism spending (at 1997 prices) is minimal (see Table 3), with the exception of 1998. Incorporation of the PTSA raised the growth of tourism demand for 1998 from 3.0% to 5.1%. In other years, revisions to annual growth rates range from -0.4 to +0.8 percentage points.

4.2 Revisions to components of tourism demand (at current prices)

Annual revisions to the components of tourism demand (at current prices) are largely upward (see Table 2). Transportation is the main exception, as lower I/O estimates of the supply of passenger air transportation in 2000 are carried forward to 2003. Tourism spending on this item is revised down close to 4.0% for 2000 through 2002, and down 4.7% for 2003.

Incorporation of the PTSA benchmarks raised tourism demand for accommodation by 3.2% over the previously published estimates for 1998. Coupled with revised indicators from the national accounts, which now include the 2002 Traveller Accommodation Survey results, this led to a 10% upward revision for 2002 which is carried forward to 2003.

Revisions to spending on food and beverage services (at current prices) are all in the upward direction, but relatively small. The estimate for 1998 is revised up 0.7% as a result of the new PTSA benchmarks. The estimate for 2000 is revised up 1.4%, the largest revision to previously published figures.

Spending on other tourism commodities is revised up, largely as a result of revisions to recreation and entertainment and pre-trip expenses. Estimates for 1998 and 1999 are now 5% to 6% higher than previously published. Those for 2000 and 2001 are 8% to 9% higher and, for 2002 and 2003, 10% to 11% higher.

Spending on non-tourism commodities (groceries and alcohol bought in stores, urban transit, and other items) is also revised up in all years except 1997. Incorporation of the PTSA raised tourism demand for this item (at current prices) by 5.2% in 1998, and this higher level is carried forward to 2003. Spending in 2003 is revised up 7.3%, the largest increase for all years under revision.

4.3 Revisions to components of tourism demand (growth rates, at 1997 prices)

While revisions to growth rates of overall tourism spending (at constant 1997 prices) are relatively small, this is not always the case at the component level (see Table 3). Transportation is notable, as the revised estimates indicate a much sharper decline in spending over 2002 to 2003. Tourism demand for this item is now estimated to have dropped 4.9% in 2003, compared to a previously published 3.9% decline.

Strong gains continue to be indicated for tourism spending on accommodation in 1997, while the revised estimates now show a modest 1.0% gain in 1998 versus a slight dip before. The previously indicated upswing in 2000 and downswing in 2001 are no longer evident. The revised estimates now indicate a slightly stronger advance in spending on accommodation in 2002, and not as sharp a drop in 2003.

Revisions to growth in tourism demand for food and beverage services (adjusted for inflation) range between - 0.8 and +1.4 percentage points. Robust gains continue to be indicated over 1997 to 2000, while weakening demand continues to register for 2001 to 2003. Demand for food and beverage services in 2003 is now estimated to have fallen only 0.8%, two-thirds of the drop indicated previously.

The growth of demand for other tourism commodities is revised up in all years, the only component to register stronger gains throughout the revision period. Introduction of the PTSA resulted in a 3.1 percentage point hike in the estimated growth of spending in 1998. Notable upward revisions were also made in 1997 and 2000.

Incorporation of the PTSA resulted in a 6.2 percentage point upward revision to the growth of spending on nontourism commodities for 1998. The revisions are also upward for 2000 through 2003. A weakening of demand since the year 2000 continues to be indicated, although not as marked as previously published.

4.4 Revisions to employment generated by tourism

Tourism employment has been revised up for 1999 to 2001 and 2003 (see Table 4). For 2003, the revised estimate is 577.6 thousand jobs, versus 572.8 thousand previously. Tourism-generated jobs in the transportation and non-tourism industries account for much of this revision, while higher employment in accommodation and non-tourism industries explain much of the revision in 1999 and 2000. Tourism employment is revised down marginally for 1997, 1998 and 2002.

Tourism employment in the transportation industry for 1997 to 1999 is now between 0.2% and 1.8% lower than previously, and between 2.2% and 4.0% higher over 2000 to 2003. Employment in the accommodation industry is unchanged in 1997 and 1998, about 4-5% higher in 1999 and 2000, and between 1.0% and 2.6% lower for 2001 to 2003. Tourism employment is revised down for other tourism industries throughout 1997 to 2003, and up throughout for non-tourism industries.

The revised estimates now indicate somewhat stronger growth in tourism employment over 1998 to 2000, especially in 1999. The stronger job gains for 1999 stem primarily from the accommodation and non-tourism industries. Considerably weaker tourism employment growth is now indicated for 2001 (+0.5% versus +2.2%) and a dip in employment is now registered for 2002 compared to a 0.5% gain before. The estimated decline in tourism jobs for 2003 is now much weaker.

4.5 Revisions to tourism gross domestic product (growth rates at 1997 prices)

The growth of tourism GDP (at 1997 prices) has been revised down from 1998 through to 2000, between 0.2 and 2.1 percentage points (see Table 6). The largest downward revision is for 1998, where growth is revised down to 5.9% from a previously estimated 8.0%.

In all other years, tourism GDP growth is revised up, marginally over 2001 to 2003, and more significantly (+2.1 percentage points) for 1997. A weakening of tourism GDP growth continues to register over the 1999 to 2003 period.

For 2003, tourism GDP is now estimated to have dropped 2.4% similar to the previously published 2.5% drop. A 0.7 percentage point downward revision to tourism GDP growth in the transportation industry was more than offset by revisions in all other industries.

Summary tables

Table 1 - Revisions to tourism demand

Curre revision (Previous estimate (2)	Revised estimate (1)	Current revision (4)	Current revision (3)	Previous estimate (2)	Revised estimate (1)	Reference period
			easonally adjusted	nots			-
% poin		% change, yea	%		nillions of dollars		_
0	6.6	7.3	0.6	48	7744	7792	1997 Q1
0	7.4	8.2	0.7	74	10464	10538	Q2
0	6.7	7.4	0.7	104	15174	15278	Q3
1	8.8	9.9	1.1	100	9174	9274	Q4
1	7.3	8.8	2.0	170	8308	8478	1998 Q1
2	5.7	7.8	2.7	300	11062	11362	Q2
2	2.5	5.2	3.3	518	15558	16076	Q3
2	5.5	7.5 5.6	3.0	291	9679 8722	9970 8955	Q4
0 -0	5.0 4.1	5.6 3.6	2.7 2.2	233 250	11519	8955 11770	1999 Q1 Q2
-0 -0	6.5	6.2	3.0	491	16577	17068	Q2 Q3
-0 -0	5.3	4.7	2.4	248	10194	10442	Q3 Q4
-3	11.3	7.6	-0.8	-73	9704	9631	2000 Q1
-1	10.3	8.6	0.6	75	12709	12784	2000 Q1
-1	9.3	7.9	1.7	306	18113	18420	Q3
-1	10.4	8.7	0.8	91	11255	11346	Q4
0	7.6	8.2	-0.2	-24	10442	10418	2001 Q1
0	3.4	4.2	1.3	175	13141	13316	Q2
0	-2.3	-1.7	2.3	406	17701	18107	Q3
1	-7.8	-6.8	1.8	192	10379	10571	Q4
1	-6.5	-4.9	1.5	144	9765	9908	2002 Q1
0	-1.6	-1.5	1.4	183	12927	13110	Q2
1	2.3	4.1	4.0	726	18115	18840	Q3
1	5.9	7.1	3.0	328	10989	11317	Q4
-1	5.5	4.4	0.5	48	10297	10345	2003 Q1
0	-5.3	-4.9	1.8	224	12240	12464	Q2
-0	-3.4	-3.7	3.6	638	17502	18140	Q3
0	-1.4	-1.3	3.1	336	10838	11174	Q4
			asonally adjusted	se			_
% poin		% change, prece	%		ons of 1997 dollars		_
0	3.0	3.7	0.6	66	10343	10409	1997 Q1
-0	2.8	2.7	0.5	56	10637	10693	Q2
0	1.3	1.5	0.7	73	10776	10849	Q3
0	0.2	0.7	1.2	129	10800	10929	Q4
0	-0.5	0.3	2.0	218	10741	10959	1998 Q1
0	1.8	2.5	2.7	294	10937	11231	Q2
0 -0	0.1 2.4	0.8 2.2	3.3 3.1	363 351	10953 11212	11316	Q3 Q4
						11563	
-0 -0	1.4	0.8 -0.7	2.6	294	11365	11659	1999 Q1
0- 0	-0.5 1.3	-0.7 1.5	2.3 2.5	262 287	11313 11457	11575 11744	Q2 Q3
-0	1.3	0.9	2.5	260	11457	11849	Q3 Q4
-0-0	0.8	1.3	2.2	325	11680	12004	2000 Q1
0	1.4	1.4	2.8	332	11845	12177	2000 Q1 Q2
0	1.4	1.4	2.9	344	11963	12307	Q2 Q3
-0	2.2	1.7	2.3	286	12229	12515	Q3 Q4
-0	0.8	1.4	2.9	362	12324	12686	2001 Q1
0	-1.9	-1.1	3.8	454	12090	12544	2001 Q1
-0	-2.6	-2.9	3.5	409	12030	12180	Q2 Q3
	-1.3	-2.6	2.2	252	11617	11869	Q4
-1	1.0	1.9	3.0	358	11737	12095	2002 Q1
			2.7	315	11844	12159	2002 Q1
0		0.5		010			Q3
0 -0	0.9	0.5 0.1		390	11786	12176	1.1.3
0 -0 0	0.9 -0.5	0.1	3.3	390 395	11786 11889	12176 12283	
-1 0 -0 0 0 -0	0.9 -0.5 0.9	0.1 0.9	3.3 3.3	395	11889	12283	Q4
0 -0 0 0 -0	0.9 -0.5 0.9 -1.3	0.1 0.9 -1.9	3.3 3.3 2.7	395 318	11889 11734	12283 12052	Q4 2003 Q1
0 -0 0 0	0.9 -0.5 0.9	0.1 0.9	3.3 3.3	395	11889	12283	Q4

Reference period	Revised estimate (1)	Previous estimate (2)	Current revision (3)	Current revision (4)	Revised estimate (1)	Previous estimate (2)	Current revision (3)	Current revision (4)
	n	nillions of dollars		%	milli	ons of 1997 dolla	ars	%
Transportation								
1997		16084	36	0.2	16119	16084	35	0.2
1998		16822	267	1.6	16994	16751	242	1.4
1999		17755	319	1.8	18138	17897	241	1.3
2000		20594	-802	-3.9	18976	18850	126	0.7
2001	18960	19713	-753	-3.8	18751	18626	125	0.7
2002 2003		19865 19442	-782 -913	-3.9 -4.7	18026 17144	18177 17476	-151 -332	-0.8 -1.9
	16529	19442	-913	-4.7	17 144	17470	-332	-1.9
Accommodation 1997	7104	6971	132	1.9	7104	6971	132	1.9
1997		7355	235	3.2	7104	6957	216	3.1
1990		7555	170	2.2	6947	6794	153	2.3
2000		8094	77	0.9	6957	6895	62	0.9
2001	8196	7849	347	4.4	6983	6776	207	3.1
2002		7604	760	10.0	7176	6927	250	3.6
2003		7028	589	8.4	6831	6565	266	4.1
Food and beverage services								
1997	6444	6404	40	0.6	6443	6404	40	0.6
1998		6816	49	0.7	6733	6685	48	0.7
1999		7254	2	0.0	6991	6990	1	0.0
2000		7756	109	1.4	7411	7309	102	1.4
2001	8320	8246	74	0.9	7599	7531	67	0.9
2002		8515	62	0.7	7594	7539	56	0.7
2003		8627	97	1.1	7534	7450	84	1.1
Other tourism commodities								
1997	7037	6871	166	2.4	7036	6871	165	2.4
1998		7080	391	5.5	7362	6977	385	5.5
1999		7556	438	5.8	7722	7302	420	5.7
2000		8036	680	8.5	8247	7582	665	8.8
2001	9023	8320	703	8.4	8372	7670	703	9.2
2002	9189	8339	850	10.2	8339	7520	819	10.9
2003	9434	8495	939	11.1	8432	7551	881	11.7
Total tourism commodities								
1997	36704	36330	374	1.0	36702	36330	371	1.0
1998	39015	38073	942	2.5	38261	37370	891	2.4
1999	41048	40119	929	2.3	39797	38982	816	2.1
2000	44543	44480	63	0.1	41591	40635	956	2.4
2001	44498	44128	370	0.8	41704	40602	1102	2.7
2002	45212	44324	889	2.0	41136	40163	973	2.4
2003	44304	43592	712	1.6	39941	39042	899	2.3
Total other commodities								
1997	6178	6226	-48	-0.8	6178	6226	-48	-0.8
1998	6870	6533	337	5.2	6807	6473	334	5.2
1999	7187	6893	294	4.3	7030	6742	288	4.3
2000	7638	7301	336	4.6	7413	7083	330	4.7
2001	7914	7535	379	5.0	7575	7200	375	5.2
2002	7963	7472	492	6.6	7578	7093	485	6.8
2003	7819	7285	534	7.3	7451	6924	527	7.6
Tourism expenditures								
1997	42882	42556	326	0.8	42880	42556	324	0.8
1998		44606	1279	2.9	45068	43842	1226	2.8
1999		47012	1223	2.6	46827	45724	1104	2.4
2000		51781	399	0.8	49003	47718	1286	2.7
2001	52412	51663	749	1.4	49279	47802	1477	3.1
2002		51795	1381	2.7	48714	47255	1458	3.1
2003	52123	50876	1246	2.4	47392	45966	1426	3.1

Table 2 - Revisions to components of tourism demand

Table 3 - Revisions to components of tourism demand (growth rates)

Reference period		Revised timate (1)	Previous estimate (2)	Current revision (3)	Revised estimate (1)	Previous estimate (2)	Curren revision (3)
		annual percentage change, at current prices		% points	annual percentag at 1997 pr		% points
Transportation							
-	1997	7.0	6.7	0.3	8.9	8.6	0.3
	1998	6.0	4.6	1.4	5.4	4.1	1.3
	1999	5.8	5.5	0.3	6.7	6.8	-0.1
:	2000	9.5	16.0	-6.5	4.6	5.3	-0.7
2	2001	-4.2	-4.3	0.1	-1.2	-1.2	0.0
2	2002	0.6	0.8	-0.2	-3.9	-2.4	-1.5
2	2003	-2.9	-2.1	-0.8	-4.9	-3.9	-1.0
Accommodation							
	1997	10.4	8.4	2.0	9.6	7.5	2.1
	1998	6.8	5.5	1.3	1.0	-0.2	1.2
	1999	1.8	2.7	-0.9	-3.1	-2.3	-0.8
	2000	5.8	7.1	-1.3	0.1	1.5	-1.4
	2001	0.3	-3.0	3.3	0.4	-1.7	2.1
	2002	2.1	-3.1	5.2	2.8	2.2	0.6
	2003	-8.9	-7.6	-1.3	-4.8	-5.2	0.4
Food and beverage services		0.0				0.2	0.1
e e	1997	10.3	9.6	0.7	8.6	7.9	0.7
	1998	6.5	6.4	0.1	4.5	4.4	0.1
	1999	5.7	6.4	-0.7	3.8	4.6	-0.8
	2000	8.4	6.9	-0.7	6.0	4.6	-0.0
	2000	5.8	6.3	-0.5	2.5	3.0	-0.5
	2001 2002	3.0 3.1	3.3	-0.5	-0.1	0.1	-0.2
	2002	1.7	1.3	-0.2	-0.1	-1.2	-0.2
	2003	1.7	1.5	0.4	-0.0	-1.2	0.4
Other tourism commodities	4007						
	1997	9.5	6.9	2.6	6.9	4.4	2.5
	1998	6.2	3.0	3.2	4.6	1.5	3.1
	1999	7.0	6.7	0.3	4.9	4.7	0.2
	2000	9.0	6.4	2.6	6.8	3.8	3.0
	2001	3.5	3.5	0.0	1.5	1.2	0.3
	2002	1.8	0.2	1.6	-0.4	-2.0	1.6
	2003	2.7	1.9	0.8	1.1	0.4	0.7
fotal tourism commodities							
	1997	8.7	7.6	1.1	8.6	7.5	1.1
	1998	6.3	4.8	1.5	4.2	2.9	1.3
	1999	5.2	5.4	-0.2	4.0	4.3	-0.3
	2000	8.5	10.9	-2.4	4.5	4.2	0.3
	2001	-0.1	-0.8	0.7	0.3	-0.1	0.4
	2002	1.6	0.4	1.2	-1.4	-1.1	-0.3
	2003	-2.0	-1.7	-0.3	-2.9	-2.8	-0.1
Total other commodities							
	1997	4.8	5.6	-0.8	3.6	4.4	-0.8
	1998	11.2	4.9	6.3	10.2	4.0	6.2
	1999	4.6	5.5	-0.9	3.3	4.2	-0.9
	2000	6.3	5.9	0.4	5.4	5.1	0.3
	2001	3.6	3.2	0.4	2.2	1.7	0.5
2	2002	0.6	-0.8	1.4	0.0	-1.5	1.5
1	2003	-1.8	-2.5	0.7	-1.7	-2.4	0.7
ourism expenditures							
	1997	8.1	7.3	0.8	7.8	7.0	0.8
	1998	7.0	4.8	2.2	5.1	3.0	2.1
	1999	5.1	5.4	-0.3	3.9	4.3	-0.4
:	2000	8.2	10.1	-1.9	4.6	4.4	0.2
:	2001	0.4	-0.2	0.6	0.6	0.2	0.4
	2002	1.5	0.3	1.2	-1.1	-1.1	0.0
	2003	-2.0	-1.8	-0.2	-2.7	-2.7	0.0

Reference period	Revised estimate (1)	Previous estimate (2)	Current revision (3)	Current revision (4)	Revised estimate (1)	Previous estimate (2)	Current revision (3)
	tł	nousands of jobs		%	annual percent	age change	% points
Transportation							
1997	80.7	80.9	-0.2	-0.2	1.5	1.8	-0.3
1998	82.5	84.0	-1.5	-1.8	2.2	3.7	-1.5
1999	86.1	87.3	-1.2	-1.4	4.4	4.0	0.4
2000	90.1	87.3	2.8	3.2	4.6	0.0	4.6
2001	85.2	83.4	1.8	2.2	-5.5	-4.5	-1.0
2002	80.8	78.7	2.1	2.7	-5.2	-5.7	0.5
2003	81.4	78.3	3.1	4.0	0.7	-0.5	1.2
Accommodation							
1997	125.9	125.9	0.0	0.0	0.0	0.1	-0.1
1998	128.4	128.3	0.1	0.1	2.0	1.9	0.1
1999	130.4	124.3	6.1	4.9	1.6	-3.1	4.7
2000	131.4	126.5	4.9	3.9	0.8	1.8	-1.0
2001	133.9	135.2	-1.3	-1.0	1.9	6.8	-4.9
2002	132.8	136.4	-3.6	-2.6	-0.8	0.9	-1.7
2003	130.7	132.0	-1.3	-1.0	-1.6	-3.3	1.7
Food and beverage services							
1997	121.9	120.1	1.8	1.5	5.2	3.7	1.5
1998	126.5	125.3	1.2	1.0	3.8	4.3	-0.5
1999	133.4	132.9	0.5	0.4	5.5	6.1	-0.6
2000	136.7	134.1	2.6	1.9	2.5	0.9	1.6
2001	138.5	137.6	0.9	0.7	1.3	2.6	-1.3
2002	140.1	140.2	-0.1	-0.1	1.2	1.9	-0.7
2003	138.9	137.6	1.3	0.9	-0.8	-1.8	1.0
Other tourism industries							
1997	85.7	90.4	-4.7	-5.2	3.4	9.0	-5.6
1998	91.0	93.5	-2.5	-2.7	6.2	3.4	2.8
1999	96.3	100.3	-4.0	-4.0	5.8	7.3	-1.5
2000	100.4	102.6	-2.2	-2.1	4.3	2.3	2.0
2001	103.1	106.6	-3.5	-3.3	2.7	3.9	-1.2
2002	105.5	108.9	-3.4	-3.1	2.3	2.1	0.2
2003	106.6	109.9	-3.3	-3.0	1.1	1.0	0.1
Total tourism industries							
1997	414.2	417.4	-3.2	-0.8	2.5	3.3	-0.8
1998	428.4	431.1	-2.7	-0.6	3.4	3.3	0.1
1999	446.2	444.9	1.3	0.3	4.2	3.2	1.0
2000	458.6	450.6	8.0	1.8	2.8	1.3	1.5
2001	460.7	462.9	-2.2	-0.5	0.5	2.7	-2.2
2002	459.2	464.2	-5.0	-1.1	-0.3	0.3	-0.6
2003	457.6	457.8	-0.2	0.0	-0.3	-1.4	1.1
Other industries			•				
1997	106.5	105.5	1.0	0.9	3.0	2.0	1.0
1998	109.1	106.7	2.4	2.2	2.5	1.1	1.4
1990		106.7	6.2	5.8	3.5	0.0	3.5
2000	112.9	113.8	3.2	2.8	3.6	6.7	-3.1
2000		113.8	4.0	3.5	0.8	0.2	-3.1
2001	118.0 119.2	114.0	3.7	3.5	1.0	1.3	-0.3
2002	120.0	113.5	5.1	4.4	0.7	-0.5	-0.3
	120.0	114.3	5.1	7.7	0.7	-0.0	1.2
Fourism activities	500 G	500.0	0.0	0.4	0.6	0.4	0.5
1997		522.9	-2.3	-0.4	2.6	3.1	-0.5
1998	537.5	537.8	-0.3	-0.1	3.2	2.9	0.3
1999	559.1	551.6	7.5	1.4	4.0	2.6	1.4
2000	575.6	564.4	11.2	2.0	2.9	2.3	0.6
2001	578.7	576.9	1.8	0.3	0.5	2.2	-1.7
2002		579.6	-1.2	-0.2	-0.1	0.5	-0.6
2003	577.6	572.8	4.8	0.8	-0.1	-1.2	1.1

Table 4 - Revisions to employment generated by tourism

Reference period		Revised estimate (1)	Previous estimate (5)	Current revision (3)	Current revision (4)	Revised estimate (1)	Previous estimate (2)	Current revision (3)
	_	millions of dollars			%	annual percent	age change	% points
Transportation								
	1997	4888	4829	59	1.2	14.3	13.0	1.3
	1998	5267	5267	0	0.0	7.7	9.1	-1.4
	1999	5698	5639	59	1.0	8.2	7.1	1.1
	2000	6032	6409	-377	-5.9	5.9	13.7	-7.8
	2001	5892	6196	-304	-4.9	-2.3	-3.3	1.0
	2002	5938	6217	-279	-4.5	0.8	0.3	0.5
	2003	5673	5961	-288	-4.8	-4.5	-4.1	-0.4
Accommodation								
	1997	4303	4222	81	1.9	4.1	2.1	2.0
	1998	4682	4683	-1	0.0	8.8	10.9	-2.1
	1999	4856	4834	22	0.5	3.7	3.2	0.5
	2000	5140	5173	-33	-0.6	5.9	7.0	-1.1
	2001	5208	5095	113	2.2	1.3	-1.5	2.8
	2002	5323	4999	324	6.5	2.2	-1.9	4.1
	2003	4962	4713	249	5.3	-6.8	-5.7	-1.1
Food and beverage servi		1002		210	0.0	0.0	0.1	
1 000 and beverage servi	1997	2195	2172	23	1.1	8.4	7.3	1.1
	1998	2335	2335	0	0.0	6.4	7.5	-1.1
	1990	2535	2535	6	0.0	8.8	8.6	-1.1
								-0.2
	2000	2713	2713	0	0.0	6.8	7.0	
	2001	2873	2896	-23	-0.8	5.9	6.7	8.0-
	2002	2963	2994	-31	-1.0	3.1	3.4	-0.3
	2003	3013	3043	-30	-1.0	1.7	1.6	0.1
Other tourism industries								
	1997	2704	2727	-23	-0.9	8.9	9.8	-0.9
	1998	2915	2915	0	0.0	7.8	6.9	0.9
	1999	3198	3282	-84	-2.5	9.7	12.6	-2.9
	2000	3453	3485	-32	-0.9	8.0	6.2	1.8
	2001	3543	3591	-48	-1.3	2.6	3.0	-0.4
	2002	3592	3558	35	1.0	1.4	-0.9	2.3
	2003	3706	3630	76	2.1	3.2	2.0	1.2
Total tourism industries								
	1997	14090	13950	140	1.0	9.1	8.0	1.1
	1998	15199	15199	0	0.0	7.9	9.0	-1.1
	1999	16293	16290	4	0.0	7.2	7.2	0.0
	2000	17338	17780	-442	-2.5	6.4	9.2	-2.8
	2001	17516	17777	-261	-1.5	1.0	0.0	1.0
	2002	17816	17767	49	0.3	1.7	-0.1	1.8
	2003	17355	17347	8	0.0	-2.6	-2.4	-0.2
Other industries	2000	11000	non	Ũ	0.0	2.0		0.2
Other industries	1997	3907	3706	201	E /	10.0	E 1	E 7
					5.4	10.8	5.1	5.7
	1998	4263	4263	0	0.0	9.1	15.0	-5.9
	1999	4531	4555	-24	-0.5	6.3	6.9	-0.6
	2000	4924	5005	-81	-1.6	8.7	9.9	-1.2
	2001	5035	5110	-75	-1.5	2.2	2.1	0.1
	2002	5135	5206	-71	-1.4	2.0	1.9	0.1
	2003	5195	5270	-75	-1.4	1.2	1.2	0.0
ourism activities								
	1997	17997	17656	341	1.9	9.4	7.4	2.0
	1998	19462	19462	0	0.0	8.1	10.2	-2.1
	1999	20824	20845	-21	-0.1	7.0	7.1	-0.1
	2000	22262	22785	-523	-2.3	6.9	9.3	-2.4
	2001	22550	22887	-337	-1.5	1.3	0.4	0.9
	2002	22951	22973	-23	-0.1	1.8	0.4	1.4
			22616	-67				

Table 5 - Revisions to tourism Gross domestic product (at current prices)

Reference period		Revised estimate (1)	Previous estimate (5)	Current revision (3)	Current revision (4)	Revised estimate (1)	Previous estimate (2)	Currer revision (3
-		milli	ons of 1997 dollars	;	%	annual percent	age change	% points
Transportation								
	1997	4888	4829	59	1.2	16.9	15.4	1.
	1998	5112	5121	-9	-0.2	4.6	6.1	-1.
	1999	5672	5643	30	0.5	11.0	10.2	0.
	2000	5917	5999	-82	-1.4	4.3	6.3	-2.
	2001	5888	5939	-52	-0.9	-0.5	-1.0	0.
	2002	5633	5733	-101	-1.8	-4.3	-3.5	-0.
	2003	5338	5475	-137	-2.5	-5.2	-4.5	-0.
Accommodation	2000		0.110		2.0	0.2		0.
	1997	4303	4222	81	1.9	3.3	1.4	1.
	1998	4451	4455	-4	-0.1	3.4	5.5	-2
	1999	4429	4407	22	0.5	-0.5	-1.1	0.
	2000	4469	4497	-28	-0.6	0.9	2.1	-1.
	2000	4503	4449	54	1.2	0.8	-1.1	1.
	2001	4597	4524	74	1.6	2.1	1.7	0.
	2002	4397	4324	89	2.1	-4.0	-4.4	0.
		4412	4323	69	2.1	-4.0	-4.4	0.
Food and beverage servi		0405	0470	00	A A	6.0	E 7	
	1997	2195	2172	23	1.1	6.8	5.7	1.
	1998	2290	2289	0	0.0	4.3	5.4	-1.
	1999	2447	2442	5	0.2	6.9	6.7	0.
	2000	2556	2556	0	0.0	4.4	4.7	-0.
	2001	2624	2644	-20	-0.8	2.6	3.5	-0.
	2002	2623	2650	-27	-1.0	0.0	0.2	-0
	2003	2602	2628	-26	-1.0	-0.8	-0.8	0.
Other tourism industries								
	1997	2704	2727	-23	-0.9	6.0	6.9	-0.
	1998	2871	2871	0	0.0	6.2	5.3	0.
	1999	3089	3171	-83	-2.6	7.6	10.5	-2.
	2000	3256	3278	-22	-0.7	5.4	3.3	2.
	2001	3250	3274	-23	-0.7	-0.2	-0.1	-0.
	2002	3202	3152	50	1.6	-1.5	-3.7	2.
	2003	3224	3145	80	2.5	0.7	-0.2	0.
otal tourism industries								
	1997	14090	13950	140	1.0	8.8	7.7	1.
	1998	14724	14736	-12	-0.1	4.5	5.6	-1.
	1999	15637	15663	-26	-0.1	6.2	6.3	-0.
	2000	16198	16330	-132	-0.2	3.6	4.3	-0. -0.
				-132				
	2001	16264	16306		-0.3	0.4	-0.1	0.
	2002	16055	16059	-4	0.0	-1.3	-1.5	0.
	2003	15577	15571	6	0.0	-3.0	-3.0	0.
Other industries	4007	0007	0700	004		0.4	0.7	-
	1997	3907	3706	201	5.4	9.4	3.7	5.
	1998	4328	4331	-3	-0.1	10.8	16.9	-6.
	1999	4440	4466	-26	-0.6	2.6	3.1	-0.
	2000	4562	4624	-63	-1.4	2.7	3.6	-0.
	2001	4661	4713	-52	-1.1	2.2	1.9	0.
	2002	4728	4771	-43	-0.9	1.5	1.2	0.
	2003	4710	4742	-32	-0.7	-0.4	-0.6	0.
ourism activities								
	1997	17997	17656	341	1.9	8.9	6.8	2
	1998	19052	19067	-15	-0.1	5.9	8.0	-2.
	1999	20077	20129	-52	-0.3	5.4	5.6	-0.
	2000	20760	20954	-194	-0.9	3.4	4.1	-0.
	2000	20700	21019	-194	-0.9	0.8	0.3	-0.
	2001	20923	20830	-94 -47	-0.4	-0.7	-0.9	0.
	2002	20784 20287	20830	-47 -26	-0.2 -0.1	-0.7 -2.4	-0.9 -2.5	0. 0.

Table 6 - Revisions to tourism Gross domestic product (at 1997 prices)

Table notes

- (1) The "revised estimates" are the result of the 2004 first quarter revisions.
- (2) The "previous estimates", for 2002 and 2003, are the ones released with the fourth quarter of those years, and for 1997 to 2001, are those released with the third quarter 2002 historical revision of the NTI.
- (3) The current revision is the revised estimate minus the previous estimate.
- (4) The current percentage revision is the current revision as a percentage of the previous estimate.
- (5) The "previous estimates", for 1997 to 2002, are the ones released with the NTI for the second quarter of 2003, and for 2003, are those released with the fourth quarter of 2003.

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- 21. "Cross-border Shopping Trends and Measurement Issues", reprinted from *National Income and Expenditure Accounts*, third quarter 1992.
- 22. "Reading Government Statistics: A User's Guide", reprinted from Policy Options, Vol. 14, No. 3, April 1993.
- 23. "The Timeliness of Quarterly Income and Expenditure Accounts: An International Comparison", reprinted from *National Income and Expenditure Accounts*, first quarter 1993.
- 24. "National Income and Expenditure Accounts: Revised Estimates for the period from 1989 to 1992", reprinted from *National Income and Expenditure Accounts*, Annual Estimates, 1981-1992.
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- 27. "The Value of Household Work in Canada, 1992", reprinted from *National Income and Expenditure Accounts*, fourth quarter 1993.
- 28. "Assessing the Size of the Underground Economy: The Statistics Canada Perspective", reprinted from *Canadian Economic Observer*, May 1994.
- 29. "National Income and Expenditure Accounts: Revised Estimates for the period from 1990 to 1993", reprinted from *National Income and Expenditure Accounts*, first quarter 1994.
- 30. "The Canadian National Accounts Environmental Component: A Status Report", reprinted from *National Income and Expenditure Accounts*, Annual Estimates, 1982-1993.
- 31. "The Tourism Satellite Account", reprinted from National income and Expenditure Accounts, second quarter 1994.
- 32. "The 1993 International System of National Accounts: Its implementation in Canada", reprinted from *National Income and Expenditure Accounts*, third quarter 1994.
- 33. "The 1995 Revision of the National Economic and Financial Accounts", reprinted from *National Economic and Financial Accounts*, first quarter 1995.
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- 35. "The Effect of Rebasing on GDP", reprinted from National Economic and Financial Accounts, second quarter 1996.
- 36. "Purchasing Power Parities and Real Expenditures, United States and Canada An Update to 1998", reprinted from *National Income and Expenditure Accounts*, third quarter 1999.
- 37. "Capitalization of Software in the National Accounts", *National Income and Expenditure Accounts technical series*, February 2002.
- 38. "The Provincial and Territorial Tourism Satellite Accounts for Canada, 1996", *National Income and Expenditure Accounts technical series*, April 2002.
- 39. "Purchasing Power Parities and Real Expenditures, United States and Canada", reprinted from *National Income and Expenditure Accounts*, first quarter 2002.

- 40. "The Provincial and Territorial Tourism Satellite Accounts for Canada, 1998", National Income and Expenditure Accounts technical series, June 2003.
- 41. "Government revenue attributable to tourism, 1998", *National Income and Expenditure Accounts technical series*, September 2003.
- 42. "Chain Fisher Index Volume Methodology", National Income and Expenditure Accounts, November 2003.
- 43. "Trends in provincial and territorial economic statistics: 1981-2002", *National Income and Expenditure Accounts*, November 2003.