

Tourism Satellite Account



*The contribution made by tourism to the
New Zealand economy in 2006*

2006

Tourism Satellite Account

2006

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Preface

The *Tourism Satellite Account 2006* provides an updated analysis of the New Zealand tourism industry and is part of an ongoing programme designed to enhance the understanding of the role tourism plays in New Zealand.

This publication has been developed and published by Statistics New Zealand. The satellite account is funded by the Ministry of Tourism. It is one component of a 'core set' of tourism data, providing base information for understanding and monitoring the changing levels and impact of tourism activity in New Zealand. Other elements of the core dataset include surveys of spending by international and domestic visitors, visitor arrival and accommodation statistics, and forecasts of tourist numbers and expenditure.

A tourism satellite account integrates in a single format data about the supply and use of tourism-related goods and services. It provides a summary measure of the contribution tourism makes to production and employment. Because it is defined by customer demand, tourism cuts across a broad range of 'conventional' industries. A tourism satellite account, consistent and integrated with New Zealand's official national accounts, ensures that the importance of the tourism sector is measured and understood in the context of the New Zealand economy as a whole.

Satellite accounts involve the rearrangement of existing information in the national accounts so that an area of particular economic or social importance, such as tourism, can be analysed more closely. As extensions of the core system of national accounts, satellite accounts are an important recommendation of the international standard, the *System of National Accounts 1993*.

The *Tourism Satellite Account 2006* has been compiled consistent with guidelines published by the World Tourism Organization and approved by the United Nations Statistical Commission in 2000.



Geoff Bascand
Government Statistician

Information

This report was prepared by the National Accounts business unit and published by the Product Development and Publishing Services business unit of Statistics New Zealand.

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Percentage changes

Percentage movements are, in a number of cases, calculated using data of greater precision than published. This could result in slight variations.

Rounding procedures

On occasion, figures are rounded to the nearest thousand or some other convenient unit. This may result in a total disagreeing slightly with the total of the individual items shown in tables. Where figures are rounded, the unit is, in general, expressed in words below the table headings, but where space does not allow this, the unit may be shown as (000) for thousands, etc.

Changes of base

Where consecutive figures have been compiled on different bases and are not strictly comparable, a footnote is added indicating the nature of the difference.

Values

All values are shown in New Zealand currency, except where otherwise stated.

Source

All data is compiled by Statistics New Zealand, except where otherwise stated.

Symbols

The interpretation of symbols used throughout this report is as follows:

R	revised
0	nil or zero
–	amount too small to be expressed
..	figures not available
...	not applicable

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1. Overview

Introduction

Tourism plays a significant role in the New Zealand economy in terms of the production of goods and services and the creation of employment opportunities. Tourism expenditure includes spending by international visitors and by domestic household, business and government travellers. International tourism expenditure includes spending by foreign students studying in New Zealand for less than 12 months.

Key results for the year ended March 2006 are:

- Total tourism expenditure was \$18.6 billion, representing an increase of 3.2 percent from the previous year.
- International tourism contributed \$8.3 billion (or 19.2 percent) to total New Zealand exports.
- Domestic tourism expenditure was \$10.3 billion.
- Tourism generated a direct contribution to gross domestic product (GDP) of \$6.9 billion, or 4.8 percent of GDP.
- The indirect value-added of industries supporting tourism generated an additional \$5.9 billion to tourism.
- The tourism industry directly employed 108,600 full-time equivalent employees (or 5.9 percent of total employment in New Zealand), an increase of 3.6 percent from the previous year.
- Tourists generated \$1.3 billion in goods and services tax (GST) revenue.

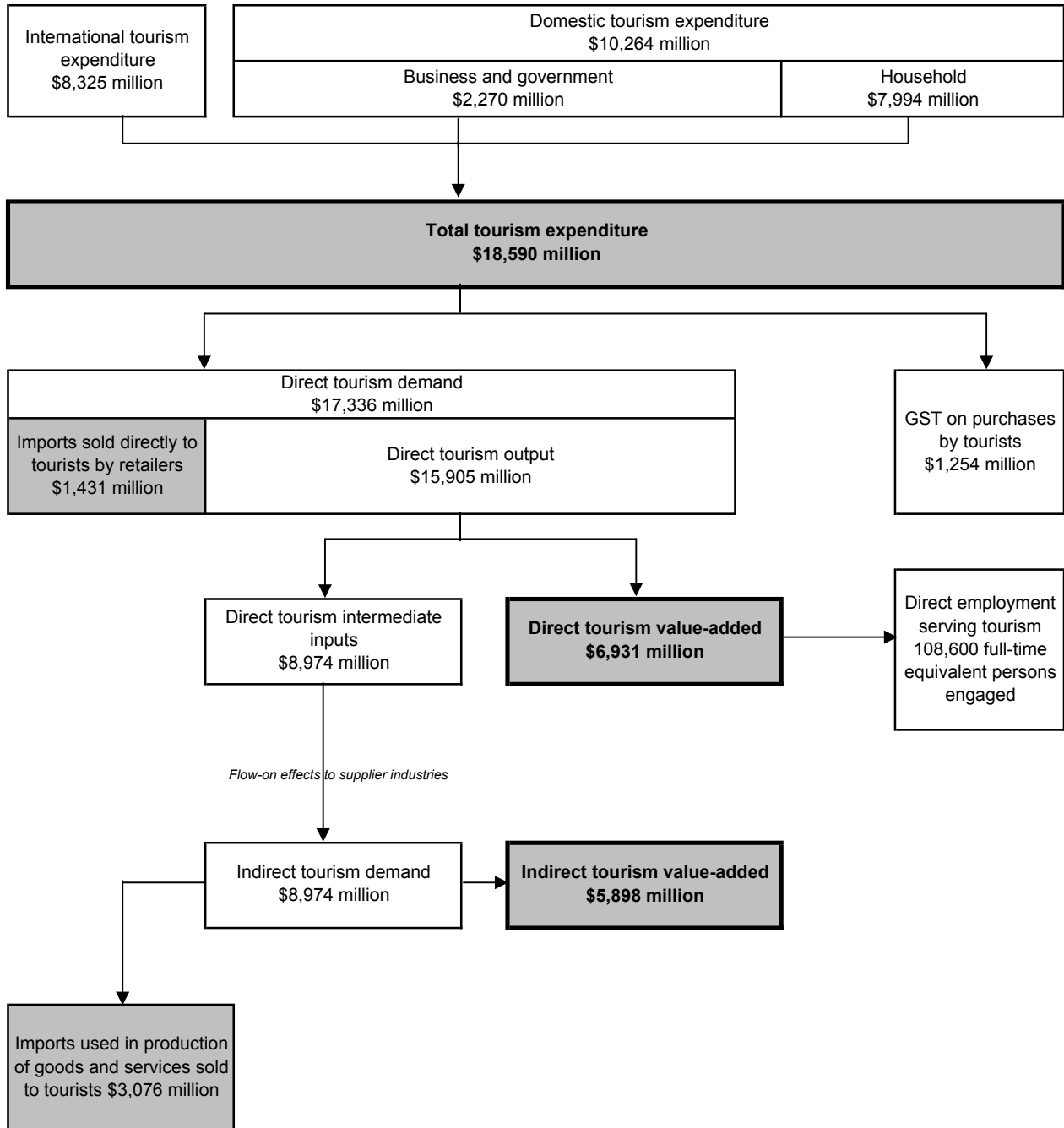
Statistics New Zealand's Accommodation Survey recorded 31.3 million guest nights spent in commercial accommodation in the year to March 2006, down 0.7 percent on the 31.5 million guest nights in the previous year. This follows increases of 5.1 percent and 3.5 percent in the years to March 2005 and 2004, respectively.

Figure 1 traces the flows of tourism expenditure through the New Zealand economy for the March 2006 year.

Figure 1

Flows of Tourism Expenditure through the New Zealand Economy

Year ended March 2006 ⁽¹⁾⁽²⁾



(1) Individual figures may not sum to stated totals due to rounding.

(2) Tourism expenditure is measured in purchasers' prices. Other monetary aggregates are measured in producers' prices.

Tourism, unlike 'conventional' industries such as agriculture or manufacturing that are classified in accordance with the goods and services they produce, is defined by the characteristics of the customer demanding tourism products. Tourism products can cut across standard industry definitions, and therefore alternative measurement systems are needed.

Satellite accounts are extensions of the core national accounts. A tourism satellite account (TSA) is used to measure the economic contribution of tourism to GDP and to provide analysis of the New Zealand tourism industry. The emphasis in the TSA is on measurement of expenditure in New Zealand by resident and non-resident tourists, and on the size of the tourism industry, including its contribution to GDP and employment.

The TSA programme produces final and provisional accounts. The supply-use balancing process, gives a detailed picture of the economy broken down by industry, product, primary input and final demand category. It provides the starting point for deriving final accounts. In order to give a more timely picture of the impact of tourism, provisional TSAs are prepared using fewer data sources than final accounts. The provisional accounts are presented in a less detailed format, and are subject to revision as relevant data sources subsequently become available.

As balanced supply and use tables are completed for the relevant years (as part of the ongoing production of the New Zealand System of National Accounts), the TSA programme will replace provisional results with final accounts.

Tourism Satellite Account 2006 presents results for 2003–2006 at the aggregated provisional estimate level. Appendix 5 contains more detailed results for the latest final account, the year ended March 2004.

Detailed final accounts for the year ended March 2003 are available on request, or can be obtained as analytical tables from the Statistics New Zealand website (www.statistics.govt.nz).

Summary results

Value-added is the 'value' businesses add to the raw material goods and services they purchase (intermediate inputs) and use in the process of producing their own outputs. The measurement of tourism's direct value-added, also known as tourism's direct contribution to GDP, is the major focus of the TSA. It measures the direct contribution the tourism industry makes to GDP. As direct value-added for tourism is measured on the same basis as that used for industries in the national accounts, it enables a consistent comparison between the tourism industry's contribution to GDP and that of industries such as agriculture and construction.

Direct value-added does not measure the full impact of tourism on the New Zealand economy because it is limited to those businesses that have a direct relationship with tourists. Additional value-added results from tourism through production of the intermediate inputs used in the production of goods and services sold to tourists, although there is no direct relationship between the producer of the intermediate inputs and the tourist. This additional value-added is known as indirect value-added.

Figure 1 illustrates that tourism expenditure can be separated into various components. This shows the impact on the value-added of industries within the New Zealand economy, on the GST received by government, and on imports of goods and services.

Table 1 presents a summary of tourism expenditure components for 1999–2006. These results are further illustrated in figure 2.

Table 1

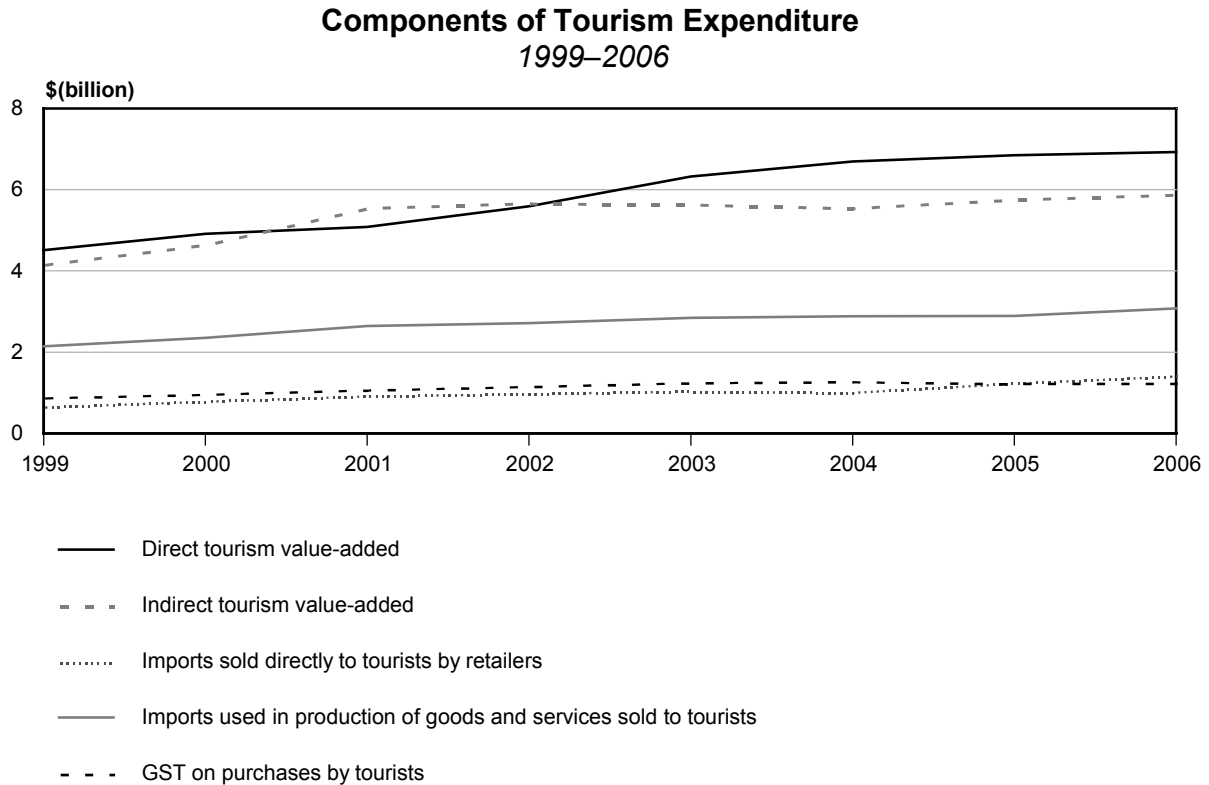
Summary of Tourism Expenditure Components⁽¹⁾

Year ended March	Direct tourism value-added	Indirect tourism value-added ⁽²⁾	Imports sold directly to tourists by retailers	Imports used in production of goods and services sold to tourists	GST on purchases by tourists	Total tourism expenditure	Value-added as a percentage of total industry contribution to GDP		
							Direct tourism value-added	Indirect tourism value-added	Total tourism value-added
\$ (million)							Percent		
1999	4,508	4,171 R	668	2,141	888	12,376 R	4.7	4.3	9.1
2000	4,916	4,668 R	814	2,350	978	13,726 R	4.9	4.6	9.5
2001	5,083	5,566 R	941	2,637	1,087	15,314 R	4.8	5.2	9.9
2002	5,593	5,689 R	999	2,711	1,172	16,164 R	4.8	4.8	9.7
2003	6,330 R	5,661 R	1,061 R	2,841 R	1,261 R	17,154 R	5.2 R	4.7	9.9 R
2004	6,700 R	5,565 R	1,025 R	2,880 R	1,292 R	17,459 R	5.2 R	4.3 R	9.5
2005	6,849 R	5,778 R	1,252 R	2,891 R	1,247 R	18,017 R	5.0 R	4.2	9.2 R
2006	6,931	5,898	1,431	3,076	1,254	18,590	4.8	4.1	8.9

(1) Individual figures may not sum to stated totals due to rounding.

(2) Results from input-output tables for 1996 have been used in the calculation of indirect tourism value-added.

Figure 2



Tourism expenditure in New Zealand was \$18.6 billion for the year ended March 2006, up 3.2 percent (\$573 million) on tourism spending in the March 2005 year.

A number of significant tourism-related events have affected New Zealand over the period covered by *Tourism Satellite Account 2006*:

- Cheaper trans-Tasman airfares and a strong New Zealand dollar have led to continued strong growth in the number of New Zealanders holidaying in Australia and other overseas destinations.
- The Easter holiday period did not fall in the March 2006 year, compared with twice in the March 2005 year (in April 2004 and March 2005).
- The 2005 British and Irish Lions Rugby Tour generated international and domestic tourism activity within New Zealand for the year ended March 2006.
- The decline in the number of international students in both the March 2004 and 2006 years coincided with a reduction in the number of English language schools operating within New Zealand.
- More than 60 films and telefeatures were filmed completely, or in part, in New Zealand between the March years of 2003–2006¹. A number of these were successful internationally.
- An outbreak of the Severe Acute Respiratory Syndrome (SARS) virus in a number of Asian countries caused instability in the international travel environment in the March 2004 year.
- New Zealand's defence of the America's Cup yachting regatta was held in Auckland in the March 2003 year.

Total tourism expenditure increased each year from 1999–2006, with the strongest growth in the March 2001 year (up 11.6 percent). However, in 2004 the increase in total tourism expenditure slowed.

Tourism expenditure in the March 2006 year generated \$6.9 billion of direct value-added and \$5.9 billion of indirect value-added to the economy. Tourism contributed 4.8 percent of GDP in the March 2006 year, which is lower than the 5.0 percent contribution for the March 2005 year.

As figure 3 shows, direct and indirect tourism value-added, when combined, account for 69 cents in every dollar spent by tourists in 2006, while GST accounts for 7 cents in every dollar spent by tourists. The remainder represents imports.

¹ Source: Film New Zealand (www.filmnz.com).

Figure 3

Share of Tourism Expenditure by Component
Year ended March 2006

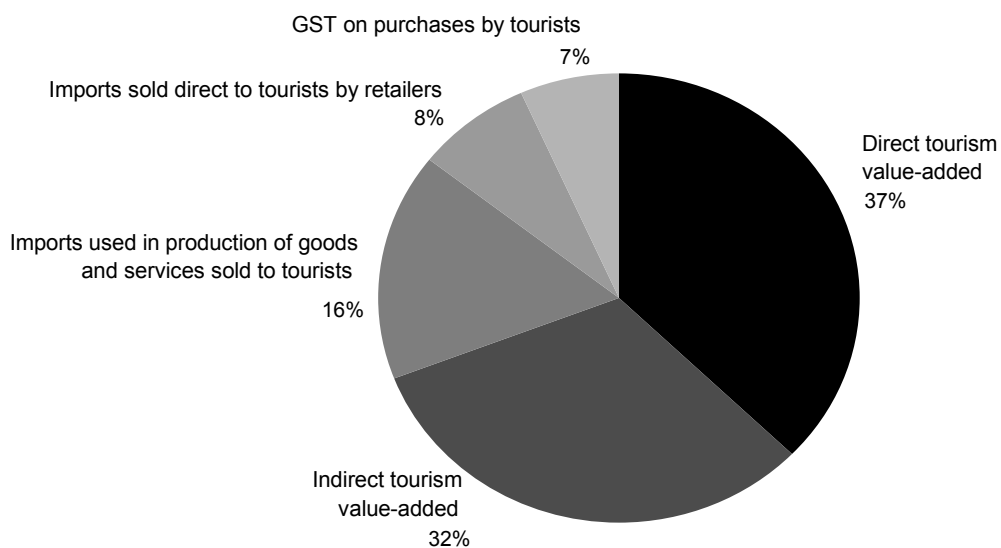
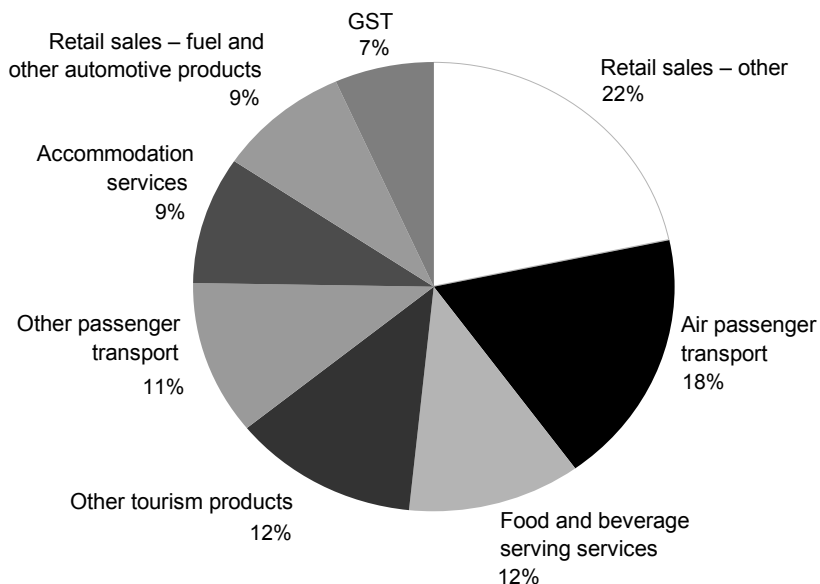


Figure 4 breaks down tourism expenditure by type of product.

Figure 4

Share of Tourism Expenditure by Type of Product
Year ended March 2006



The main products purchased by tourists are retail goods (including fuel and other automotive products) and air passenger transport, contributing 31 percent and 18 percent, respectively (before GST). Tourists spent 12 percent of their budget on food and beverage services and 9 percent on accommodation.

Table 2 and figure 5 present tourism expenditure separated into expenditure by international and domestic tourists.

Table 2

Summary of Tourism Expenditure by Type of Tourist⁽¹⁾

Year ended March	International tourism expenditure		Domestic tourism expenditure ⁽²⁾		Total tourism expenditure ⁽²⁾		Total exports of goods and services ⁽³⁾	International tourism as a percentage of total exports
	\$(million)	Annual percentage change	\$(million)	Annual percentage change	\$(million)	Annual percentage change	\$(million)	Percent
1999	4,950	...	7,427 R	...	12,376 R	...	30,468	16.2
2000	5,923	19.7	7,803 R	5.1	13,726 R	10.9	33,595	17.6
2001	6,763	14.2	8,551 R	9.6	15,314 R	11.6	41,159 R	16.4
2002	7,093	4.9	9,071 R	6.1	16,165 R	5.6	43,694	16.2
2003	7,567 R	6.7 R	9,587 R	5.7 R	17,154 R	6.1 R	42,339 R	17.9 R
2004	7,714 R	1.9 R	9,746 R	1.7 R	17,459 R	1.8 R	40,346 R	19.1 R
2005	8,102 R	5.0 R	9,915 R	1.7 R	18,017 R	3.2 R	42,960 R	18.9 R
2006	8,325	2.8	10,264	3.5	18,590	3.2	43,290	19.2

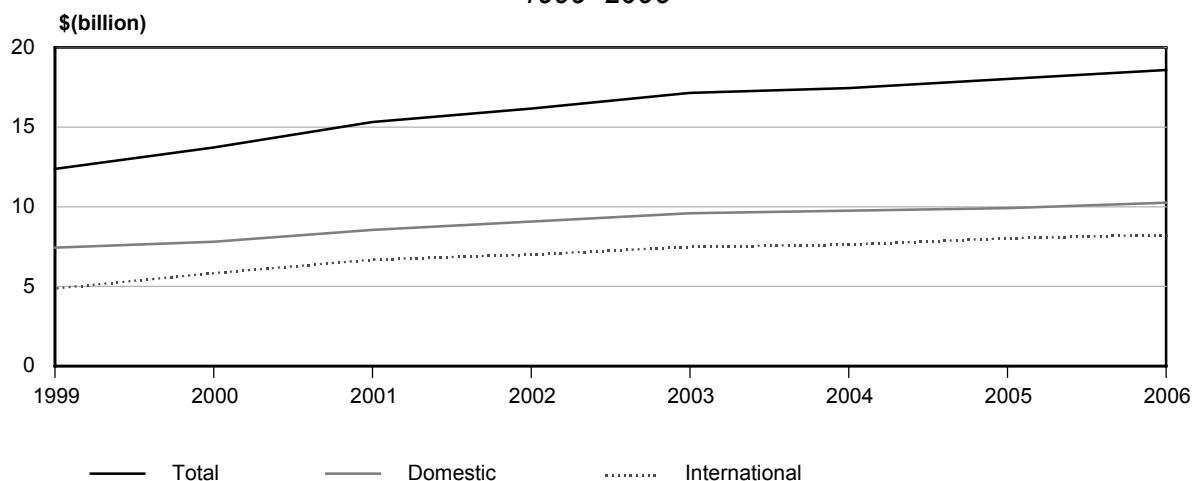
(1) Individual figures may not sum to stated totals due to rounding.

(2) Revisions for years 1999–2001 reflect a change to imputed rental methodology. For more details refer to appendix 2.

(3) Revisions for 2001, 2003, 2004 and 2005 incorporate *National Accounts (Revised): Year ended March 2006* data.

Figure 5

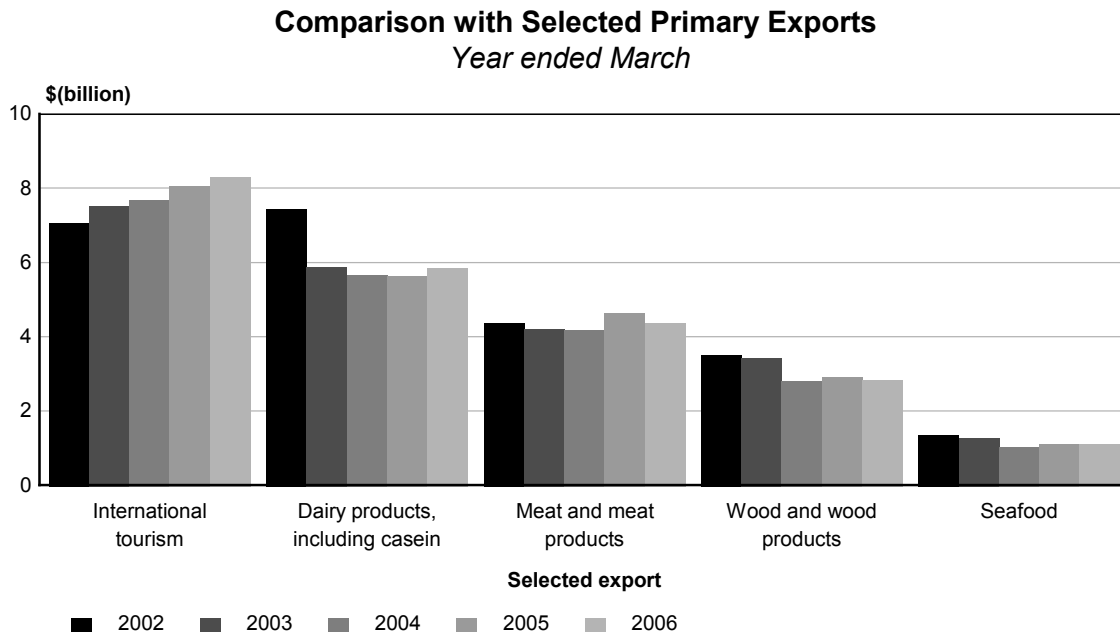
**Tourism Expenditure by Type of Tourist
1999–2006**



For the year ended March 2006, both international tourism expenditure (up 2.8 percent) and domestic tourism expenditure (up 3.5 percent) increased.

International tourism continues to be a major export earner for New Zealand and compares favourably with other traditional export products, as figure 6 shows.

Figure 6



In 2006, international tourism's contribution to total exports, at \$8.3 billion (19.2 percent), was a bigger contributor than the export receipts from dairy products, including casein, which totalled \$5.9 billion (13.6 percent).

Table 3 summarises tourism employment results.

Table 3

Summary of Tourism Employment ⁽¹⁾⁽²⁾

Year ended March	Employment (FTE ⁽³⁾ persons)			Employment (FTE persons) engaged in tourism as a percentage of total employment in New Zealand		
	Directly engaged in tourism	Indirectly engaged in tourism	Total tourism employment in New Zealand	Directly engaged in tourism	Indirectly engaged in tourism	Total tourism employment in New Zealand
				Percent		
2003	105,300 R	70,700 R	176,000 R	6.2	4.2	10.4
2004	103,300 R	69,600 R	172,900 R	5.9 R	4.0	10.0
2005	104,800 R	70,800 R	175,600 R	5.8	3.9	9.8
2006	108,600	74,500	183,100	5.9	4.0	9.9

(1) As a result of a change in methodology, this data is only available from 2001. For more details refer to appendix 2.

(2) Individual figures may not sum to stated totals due to rounding.

(3) FTE is an abbreviation for full-time equivalent.

The tourism industry directly employed 108,600 full-time equivalent employees in 2006, an increase of 3.6 percent from the previous year. This includes employment generated by foreign students studying in New Zealand for less than 12 months.

Tourism activity directly generated 5.9 percent of total employment in New Zealand. This compares with tourism generating 4.8 percent of direct value-added. The fact that tourism contributes more to total employment than it does to total direct value-added reflects a higher level of labour intensity, or possibly a lower level of labour productivity, in tourism industries.

Results

The results are presented in three sections:

- **Tourism expenditure, supply and value-added** provides information on expenditure by tourists on goods and services produced within New Zealand, and the value-added generated by industries producing those goods and services. International tourism expenditure includes spending by foreign students studying in New Zealand for less than 12 months.
- **Direct tourism employment** covers tourism employment and adds another dimension to measuring the role of tourism in the New Zealand economy, focusing on tourism's impact on the important economic variable of employment.
- **Tourism industry analytical measures** provides time series information on tourism profitability and labour productivity.

Tourism expenditure, supply and value-added

Tourism expenditure

The major focus of the TSA is the identification and measurement of tourism expenditure on goods and services produced within the New Zealand economy. From this, tourism's direct contribution to GDP can be derived and compared with the contribution to GDP of other industries such as agriculture or manufacturing.

Table 4 and figure 7 present tourism expenditure (or direct tourism demand) by type of product for 2003–2006.

Table 4

Tourism Expenditure by Type of Product⁽¹⁾⁽²⁾

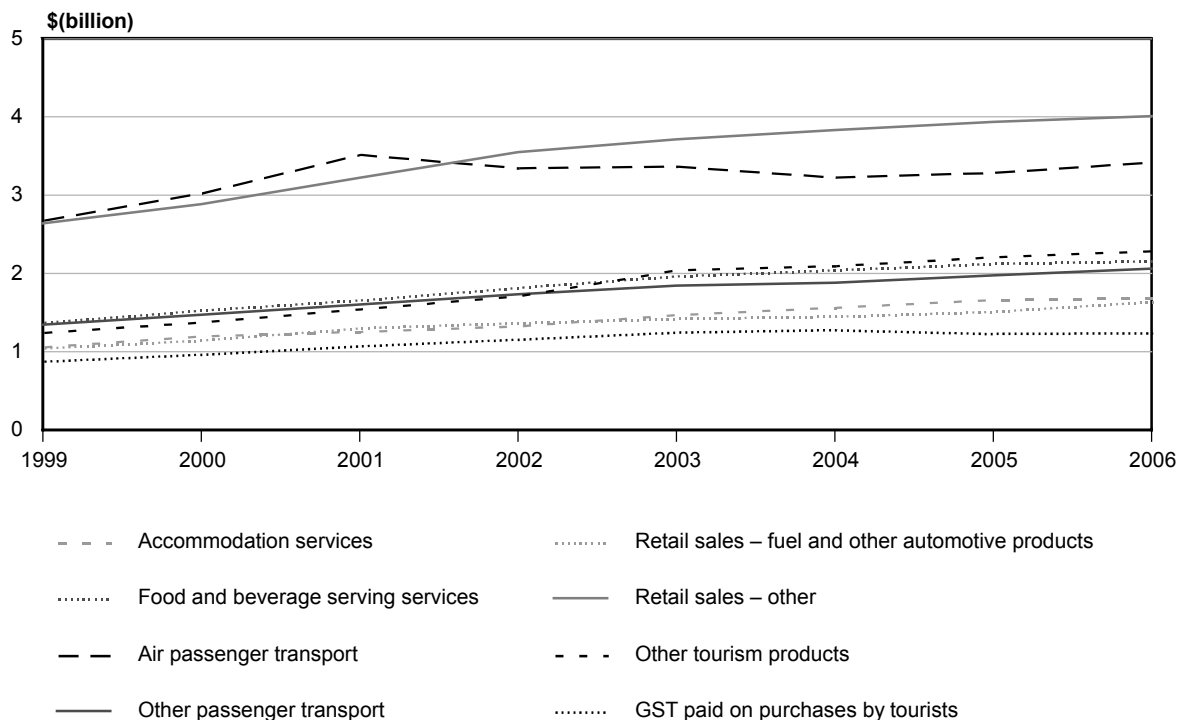
Product	Year ended March				Annual percentage change		
	2003	2004	2005	2006	2004	2005	2006
	\$(million)				Percent		
Accommodation services	1,484 R	1,578 R	1,675 R	1,707	6.3 R	6.1 R	1.9
Food and beverage serving services	1,977 R	2,058 R	2,137 R	2,173	4.1 R	3.9 R	1.7
Air passenger transport	3,382 R	3,245 R	3,301 R	3,436	-4.1 R	1.7 R	4.1
Other passenger transport	1,844 R	1,880 R	1,976 R	2,059	2.0 R	5.1 R	4.2
Retail sales – fuel and other automotive products	1,432 R	1,464 R	1,525 R	1,651	2.2 R	4.2 R	8.3
Retail sales – other	3,715 R	3,832 R	3,935 R	4,009	3.1 R	2.7 R	1.9
Other tourism products	2,057 R	2,111 R	2,222 R	2,301	2.6 R	5.3 R	3.6
Total tourism demand excluding GST	15,893 R	16,167 R	16,770 R	17,336	1.7 R	3.7 R	3.4
GST paid on purchases by tourists	1,261 R	1,292 R	1,247 R	1,254	2.5 R	-3.5 R	0.5
Total tourism expenditure	17,154 R	17,459 R	18,017 R	18,590	1.8 R	3.2 R	3.2

(1) All values are in producers' prices.

(2) Individual figures may not sum to stated totals due to rounding.

Figure 7

Tourism Expenditure by Type of Product 1999–2006



Points to note from table 4 and figure 7:

- Total tourism expenditure increased 3.2 percent in 2006, following an increase of 3.2 percent in 2005 and 1.8 percent in 2004.
- In 2006, tourism spending on accommodation increased 1.9 percent, with spending on transport, excluding air passenger transport, increasing 4.2 percent. Retail sales – fuel and other automotive products, increased 8.3 percent.

Table 5 presents the breakdown of international visitors by region of last permanent residence and by purpose of visit for the years ended March 2003–2006.

Table 5

Overseas Visitor Arrivals⁽¹⁾⁽²⁾

	Year ended March				Annual percentage change		
	2003	2004	2005	2006	2004	2005	2006
	Number				Percent		
By region of last permanent residence							
Oceania	735,588	840,033	985,179	R 1,023,367	14.2	17.3	R 3.9
Asia	545,538	490,179	519,560	R 512,084	-10.1	6.0	R -1.4
Europe	426,808	467,984	513,257	R 508,753	9.6	9.7	R -0.9
Americas	260,821	264,792	276,214	R 295,176	1.5	4.3	R 6.9
Other ⁽³⁾	92,377	98,311	71,319	R 69,508	6.4	-27.5	R -2.5
Total⁽⁴⁾	2,062,423	2,163,427	2,365,529	R 2,408,888	4.9	9.3	R 1.8
By purpose of visit							
Holiday/vacation	1,086,051	1,105,344	1,192,001	R 1,195,492	1.8	7.8	R 0.3
Visit friends/relatives	521,956	601,803	673,572	R 690,200	15.3	11.9	R 2.5
Conference/convention	39,940	45,397	59,330	R 57,705	13.7	30.7	R -2.7
Business	216,884	224,061	259,171	R 270,089	3.3	15.7	R 4.2
Education/medical	54,835	46,275	48,072	R 51,271	-15.6	3.9	R 6.7
Other ⁽⁵⁾	141,466	138,419	133,383	R 144,131	-2.2	-3.6	R 8.1

(1) Intended length of stay in New Zealand is less than 12 months.

(2) Individual figures may not sum to stated totals due to rounding.

(3) Includes not stated.

(4) These totals are actual counts, and may differ from the sum of individual figures for different countries that are derived from samples.

(5) Includes unspecified.

International visitors increased 1.8 percent (43,359) in the year ended March 2006, following increases of 9.3 percent and 4.9 percent in the years ended March 2005 and March 2004, respectively.

Visitor numbers from the Americas increased 6.9 percent (18,962) in the year ended March 2006, following a 4.3 percent (11,422) increase in the year ended March 2005. Visitors from Oceania (predominantly Australia) surpassed 1 million, although the 3.9 percent increase (38,188) in the March 2006 year was lower than the strong growth recorded in 2004 and 2005. Offsetting these increases to the year ended March 2006 were a 0.9 percent decrease (4,504) in visitors from Europe and a 1.4 percent decrease (7,476) from Asia.

Much of the growth in the number of short-term arrivals to New Zealand stemmed from people visiting friends/relatives and for business purposes. These categories increased 2.5 percent (16,628) and 4.2 percent (10,918) respectively in the year to March 2006. The conference/convention category declined 2.7 percent (1,625) following very strong growth of 30.7 percent (13,933) in 2005.

In the context of the TSA, the term 'tourist' includes travellers who might not usually be associated with the term. In addition to holiday and leisure travel, it also covers other activities of visitors, such as conducting business, attending meetings and conferences, and arriving for short-term education. Domestic costs incurred by New Zealanders travelling overseas are included in domestic travel expenditure, as well as off-trip purchases of tourism-specific consumer durable goods.

Table 6 presents tourism expenditure by type of product by type of tourist for the years ended March 2003–2006. The tourist product ratio is the proportion of total supply of each product that is purchased by tourists.

Table 6

Tourism Expenditure⁽¹⁾⁽²⁾
By type of product and type of tourist
 Year ended March 2003–2006

Product	Domestic demand		International demand	Total demand	Total supply	Tourism product ratio
	Business and government demand	Household demand				
\$(million)						
2003						
Accommodation services	179 R	450 R	855 R	1,484 R	1,556 R	0.95
Food and beverage serving services	59 R	764 R	1,154 R	1,977 R	4,599 R	0.43
Air passenger transport	793 R	579 R	2,011 R	3,382 R	3,466 R	0.98
Other passenger transport	756 R	424 R	665 R	1,844 R	2,459 R	0.75
Retail sales – fuel and other automotive products	122 R	1,111 R	199 R	1,432 R	6,219 R	0.23 R
Retail sales – other	0	2,536 R	1,179 R	3,715 R	70,245 R	0.05
Other tourism products	135 R	912 R	1,010 R	2,057 R	38,011 R	0.05
Total tourism demand by type of tourist excluding GST	2,043 R	6,777 R	7,074 R	15,893 R	...	...
GST paid on purchases by tourists	10	758 R	493 R	1,261 R	...	...
Total tourism expenditure by type of tourist	2,053 R	7,534 R	7,567 R	17,154 R	...	...
2004						
Accommodation services	198 R	465 R	915 R	1,578 R	1,674 R	0.94 R
Food and beverage serving services	60 R	769 R	1,228 R	2,058 R	4,818 R	0.43
Air passenger transport	803 R	591 R	1,850 R	3,245 R	3,306 R	0.98
Other passenger transport	751 R	429 R	700 R	1,880 R	2,523 R	0.75
Retail sales – fuel and other automotive products	130 R	1,117 R	216 R	1,464 R	6,290 R	0.23 R
Retail sales – other	0	2,589 R	1,243 R	3,832 R	73,610 R	0.05 R
Other tourism products	136 R	933 R	1,042 R	2,111 R	40,134 R	0.05
Total tourism demand by type of tourist excluding GST	2,079 R	6,893 R	7,194 R	16,167 R	...	...
GST paid on purchases by tourists	11	762 R	519 R	1,292 R	...	...
Total tourism expenditure by type of tourist	2,090 R	7,655 R	7,714 R	17,459 R	...	...

For footnotes, see end of table.

Points to note from table 6:

- Domestic tourism expenditure by New Zealand households increased 3.5 percent in the March 2006 year, following an increase of 0.9 percent in the previous year. Between 2003 and 2006, domestic tourism spending by New Zealand households increased 6.1 percent. Over the corresponding period total household final consumption expenditure (HCE), increased 21.4 percent.

Table 6 continued

Tourism Expenditure⁽¹⁾⁽²⁾
By type of product and type of tourist
 Year ended March 2003–2006

Product	Domestic demand		International demand	Total demand	Total supply	Tourism product ratio
	Business and government demand	Household demand				
\$(million)						
2005						
Accommodation services	203 R	470 R	1,002 R	1,675 R	1,766 R	0.95
Food and beverage serving services	65	773 R	1,299 R	2,137 R	4,999 R	0.43
Air passenger transport	830 R	630 R	1,841 R	3,301 R	3,362 R	0.98 R
Other passenger transport	795 R	441 R	739 R	1,976 R	2,611 R	0.76 R
Retail sales – fuel and other automotive products	133 R	1,152 R	240 R	1,525 R	6,542 R	0.23 R
Retail sales – other	0	2,605 R	1,330 R	3,935 R	75,997 R	0.05
Other tourism products	154 R	950 R	1,118 R	2,222 R	41,587 R	0.05
Total tourism demand by type of tourist excluding GST	2,181 R	7,021 R	7,568 R	16,770 R	...	...
GST paid on purchases by tourists	12 R	701 R	533 R	1,247 R	...	...
Total tourism expenditure by type of tourist	2,193 R	7,723 R	8,102 R	18,017 R	...	...
2006						
Accommodation services	209	479	1,019	1,707	1,801	0.95
Food and beverage serving services	71	788	1,314	2,173	5,115	0.42
Air passenger transport	868	672	1,895	3,436	3,518	0.98
Other passenger transport	821	459	779	2,059	2,728	0.75
Retail sales – fuel and other automotive products	136	1,251	264	1,651	7,061	0.23
Retail sales – other	0	2,641	1,368	4,009	78,361	0.05
Other tourism products	153	993	1,155	2,301	42,897	0.05
Total tourism demand by type of tourist excluding GST	2,259	7,283	7,795	17,336	...	...
GST paid on purchases by tourists	12	711	531	1,254	...	...
Total tourism expenditure by type of tourist	2,270	7,994	8,325	18,590	...	...

(1) All values are in producers' prices.

(2) Individual figures may not sum to stated totals due to rounding.

- Growth in domestic household tourism demand in the March 2006 year was strongest in retail sales – fuel and other automotive products, up 8.6 percent (\$99 million) and air passenger transport, up 6.7 percent (\$42 million), from the previous year.
- International tourism expenditure increased 2.8 percent in the March 2006 year, following increases of 5.0 percent in the March 2005 year and 1.9 percent in the March 2004 year.
- International tourism demand for air passenger transport increased 2.9 percent (\$54 million) in the March 2006 year – the first increase since 2002.

Tourism supply

Tourism supply for an industry is derived by summing the value of the tourism products supplied by that industry. The value of a tourism product is derived as the total supply (national production plus imports) of that product multiplied by its corresponding tourism product ratio from table 6.

In 2003 and 2004, the value of total supply by product and by industry was sourced from the balanced supply and use tables for these years.

As supply and use tables were unavailable for the years ending March 2005 and 2006, an initial value of supply by product by industry was made from a variety of sources (covered in detail in appendix 2: Methodology). Given the unavailability of this information, supply by product and value-added are shown only for tourism-characteristic industries and for all other industries. (See appendix 4: Tourism industry concordance, for detailed listings).

Total supply and tourism supply by product are shown in table 7 for the years ending March 2003–2006.

Table 7

Derivation of Tourism Supply⁽¹⁾⁽²⁾
Year ended March 2003–2006

Product	Total supply				Tourism product ratio	Tourism supply			
	Tourism-characteristic industries	All other industries	Imports	Total		Tourism-characteristic industries	All other industries	Imports	Total
	\$(million)					\$(million)			
2003									
Accommodation services	1,232 R	324 R	0	1,556 R	0.95	1,175 R	309 R	0	1,484 R
Food and beverage serving services	3,468 R	1,131 R	0	4,599 R	0.43	1,517 R	460 R	0	1,977 R
Air passenger transport	3,402 R	64 R	0	3,466 R	0.98	3,344 R	39 R	0	3,382 R
Other passenger transport	2,318 R	141 R	0	2,459 R	0.75	1,778 R	66	0	1,844 R
Retail sales – fuel and other automotive products	32 R	4,671 R	1,517	6,219 R	0.23 R	7 R	1,133 R	293 R	1,432 R
Retail sales – other	759 R	54,007 R	15,479	70,245 R	0.05	66	2,880 R	768 R	3,714 R
Other tourism products	2,986 R	35,025 R	0	38,011 R	0.05	429 R	1,628 R	0	2,057 R
Total tourism products	14,197 R	95,364 R	16,995 R	126,556 R	...	8,317 R	6,515 R	1,061 R	15,892 R
2004									
Accommodation services	1,308 R	366 R	0	1,674 R	0.94 R	1,233 R	345 R	0	1,578 R
Food and beverage serving services	3,603 R	1,214 R	0	4,818 R	0.43	1,577 R	480 R	0	2,058 R
Air passenger transport	3,246 R	60 R	0	3,306 R	0.98	3,203 R	42 R	0	3,245 R
Other passenger transport	2,370 R	153 R	0	2,523 R	0.75	1,810 R	71 R	0	1,880 R
Retail sales – fuel and other automotive products	31 R	4,720 R	1,539 R	6,290 R	0.23 R	6 R	1,157 R	300 R	1,464 R
Retail sales – other	780 R	56,834 R	15,995 R	73,610 R	0.05 R	63 R	3,041 R	724 R	3,829 R
Other tourism products	3,210 R	36,924 R	0	40,134 R	0.05	454 R	1,656 R	0	2,111 R
Total tourism products	14,549 R	100,271 R	17,534 R	132,353 R	...	8,346 R	6,793 R	1,025 R	16,164 R

For footnotes, see end of table.

Table 7 continued

Derivation of Tourism Supply⁽¹⁾⁽²⁾
Year ended March 2003–2006

Product	Total supply				Tourism product ratio	Tourism supply			
	Tourism-characteristic industries	All other industries	Imports	Total		Tourism-characteristic industries	All other industries	Imports	Total
	\$(million)					\$(million)			
2005									
Accommodation services	1,384 R	382 R	0	1,766 R	0.95	1,591 R	83 R	0	1,675 R
Food and beverage serving services	3,742 R	1,257 R	0	4,999 R	0.43	1,616 R	522 R	0	2,137 R
Air passenger transport	3,287 R	75 R	0	3,362 R	0.98 R	3,253 R	48 R	0	3,301 R
Other passenger transport	2,446 R	165 R	0	2,611 R	0.76 R	1,949 R	27 R	0	1,976 R
Retail sales – fuel and other automotive products	35 R	4,259 R	2,247 R	6,542 R	0.23 R	8 R	1,072 R	446 R	1,525 R
Retail sales – other	1,396 R	58,377 R	16,224 R	75,997 R	0.05	71 R	3,057 R	807 R	3,935 R
Other tourism products	3,290 R	38,296 R	0	41,587 R	0.05	454 R	1,768 R	0	2,222 R
Total tourism products	15,580 R	102,812 R	18,471 R	136,863 R	...	8,942 R	6,576 R	1,252 R	16,770 R
2006									
Accommodation services	1,451	350	0	1,801	0.95	1,375	332	0	1,707
Food and beverage serving services	3,811	1,304	0	5,115	0.42	1,626	547	0	2,173
Air passenger transport	3,353	165	0	3,518	0.98	3,298	137	0	3,436
Other passenger transport	2,557	171	0	2,728	0.75	2,035	25	0	2,059
Retail sales – fuel and other automotive products	37	4,237	2,787	7,061	0.23	8	1,084	559	1,651
Retail sales – other	1,860	59,675	16,827	78,361	0.05	129	3,007	873	4,009
Other tourism products	3,419	39,478	0	42,897	0.05	466	1,835	0	2,301
Total tourism products	16,487	105,381	19,613	141,481	...	8,937	6,968	1,431	17,336

(1) Tourism supply by product may differ from that obtained by multiplying total supply by the relevant tourism product ratio. Supply is generally calculated at a finer product level than shown.

(2) Individual figures may not sum to stated totals due to rounding.

Points to note from table 7:

- Goods and services can be consumed/purchased by tourists and non-tourists. The tourism product ratio indicates the proportion of the supply of a product that is purchased by tourists. In 2006, for example, the tourism product ratio for accommodation services was 0.95. This means that almost all accommodation available was purchased by tourists. In contrast, tourists purchased only 23 percent of retail supplies of fuel and other automotive products.
- Tourism supply increased 3.4 percent in the March 2006 year. From 2003–2006, tourism supply increased at a slower rate than total supply (9.1 percent compared with 11.8 percent over this three year period).
- Imports consumed by tourists represent 8.3 percent of total tourism supply in the March 2006 year with the remainder provided by domestic industries.

Direct tourism value-added

Direct tourism value-added calculations are done at a finer level of industry detail than is presented in table 8.

- The tourism industry ratio is calculated by dividing tourism supply by industry by the total supply for that industry. The tourism industry ratio represents the proportion of each industry's output that is consumed by tourists.
- The tourism industry ratios are then multiplied through the production accounts for each industry to give direct tourism value-added. This is summarised and presented in table 8 for the years ending March 2003–2006.

Table 8

Direct Tourism Value-added⁽¹⁾

	Year ended March				Annual percentage change		
	2003	2004	2005	2006	2004	2005	2006
	\$(million)				Percent		
Published GDP	130,983 R	139,753 R	149,143 R	156,630	6.7 R	6.7 R	5.0
Less GST, import duties and other taxes on production	9,593 R	10,297 R	11,147 R	11,957	7.3 R	8.3 R	7.3
Gives contribution to GDP from production	121,390 R	129,456 R	137,996 R	144,673	6.6 R	6.6 R	4.8
Tourism output of tourism-characteristic industries	8,284 R	8,349 R	9,225 R	9,137	0.8 R	10.5 R	-1.0
Less tourism intermediate consumption of tourism-characteristic industries	5,177 R	4,956 R	5,422 R	5,399	-4.3 R	9.4 R	-0.4
Gives direct tourism value-added of tourism-characteristic industries	3,107 R	3,393 R	3,803 R	3,738	9.2 R	12.1 R	-1.7
Plus direct tourism value-added of all other industries	3,223 R	3,306 R	3,046 R	3,193	2.6 R	-7.9 R	4.8
Gives total direct tourism value-added	6,330 R	6,700 R	6,849 R	6,931	5.8 R	2.2 R	1.2
Direct tourism value-added as a percentage of total industry contribution to GDP	5.2% R	5.2% R	5.0% R	4.8%	...	...	...

(1) Individual figures may not sum to stated totals due to rounding.

Points to note from table 8:

- Between 2003 and 2006, direct tourism value-added (also referred to as tourism's direct contribution to GDP) increased by 9.5 percent, a lower rate than the total of all industries' contribution to GDP, which increased by 19.2 percent. The ratio of direct tourism value-added to total contribution to GDP was 5.2 percent and 4.8 percent in these years respectively.
- In 2003, direct tourism value-added as a percentage of total industry contribution to GDP peaked at 5.2 percent. During that year, New Zealand hosted the America's Cup yachting regatta in Auckland. However, in 2005 and 2006, direct tourism value-added as a percentage of total industry contribution to GDP has shown a lower contribution.

Direct tourism value-added does not necessarily show the same movement as tourism expenditure. This is because changes in expenditure patterns flow through into the composition of industries that supply products consumed by tourists. To the extent that these industries have differing input-output ratios, there will be differences in the movement of expenditure and direct value-added.

To summarise, as illustrated in figure 1, total expenditure on goods and services by tourists (\$18,590 million in 2006) consisted of three direct components:

- Direct tourism output of \$15,905 million, representing the value of goods and services produced in New Zealand and directly purchased by tourists. This domestic production (in producers' prices) consisted of \$8,974 million of intermediate inputs, and \$6,931 million of direct tourism value-added. This represented the value producers in New Zealand add to inputs (value-added) used in producing the goods and services bought by tourists.
- Imports of \$1,431 million sold directly to tourists by retailers.
- GST of \$1,254 million paid on goods and services purchased by tourists.

Indirect tourism value-added and imports

For some analysis, interest lies in a broader measure of tourism value-added. Such a measure goes beyond the value-added generated by producers directly supplying tourism products, and embraces the total value-added of all producers both directly and indirectly created by the initial tourism expenditure. This additional measure is indirect tourism value-added (or tourism's indirect contribution to GDP). It is the additional value-added that is generated by the initial 'round' of tourism spending.

Measuring indirect tourism value-added involves tracing the flow-on effects of businesses' intermediate purchases that are used directly in producing tourism products (\$8,974 million in 2006) and measuring the cumulative value-added these purchases generate. For example, included in the \$8,974 million are the intermediate purchases of the accommodation and cafes and restaurants industries. These include items such as electricity, bedding and food purchased from other industries or imports. In turn, these other industries will have made intermediate purchases from other industries (or from overseas) in order to produce the items they sell to the accommodation and cafes and restaurants industries. So the sequence continues, until all intermediate purchases can be directly accounted for, either as value-added or imports.

Measuring indirect tourism contribution to GDP involves summing the value-added of each industry that is generated throughout this sequence. Ultimately, total tourism expenditure can be explained in terms of:

- direct tourism value-added
- indirect tourism value-added
- imports (both those directly sold to tourists and those used indirectly in production), and
- GST.

Note that some of tourism indirect demand for intermediate inputs will not be met by the output of New Zealand producers, but by imports that provide no direct contribution to New Zealand's GDP.

Table 9 summarises the relationship between the various concepts.

Table 9

Components of Tourism Expenditure⁽¹⁾

	Year ended March				Annual percentage change		
	2003	2004	2005	2006	2004	2005	2006
	\$(million)				Percent		
Direct tourism value-added	6,330 R	6,700 R	6,849 R	6,931	5.8 R	2.2 R	1.2
Indirect tourism value-added	5,661 R	5,565 R	5,778 R	5,898	-1.7 R	3.8 R	2.1
Imports sold directly to tourists by retailers	1,061 R	1,025 R	1,252 R	1,431	-3.4 R	22.1 R	14.3
Imports used in production of goods and services sold to tourists	2,841 R	2,880 R	2,891 R	3,076	1.4 R	0.4 R	6.4
GST on purchases by tourists	1,261 R	1,292 R	1,247 R	1,254	2.5 R	-3.5 R	0.6
Total tourism expenditure	17,154 R	17,459 R	18,017 R	18,590	1.8 R	3.2 R	3.2

(1) Individual figures may not sum to stated totals due to rounding.

Within components of tourism expenditure, the composition of industries supplying products to tourists may produce movements in direct value-added that differ from movements in expenditure, because of variations in the input-output ratios of industries.

These changes in industry composition also flow through into other economic aggregates. For example, in the year ended March 2006, direct tourism value-added increased by 1.2 percent, while total tourism expenditure increased by 3.2 percent. This is due to an increasing proportion of tourism demand met by industries with relatively lower value-added to output ratios.

Movements in the value of imports directly sold to tourists are strongly influenced by exchange rate variations and changes in the mix of products purchased. In the March 2006 year, imports sold directly to tourists by retailers increased by 14.3 percent, while total tourism expenditure rose 3.2 percent.

Alternatively, the components can be presented as their share of total tourism expenditure as shown for the years ended March 2003–2006 in table 10.

Table 10

Share of Tourism Expenditure by Component

	Year ended March			
	2003	2004	2005	2006
	Percent			
Total tourism expenditure:	100	100	100	100
Direct tourism value-added	36.9 R	38.4 R	38.0 R	37.3
Indirect tourism value-added	33.0 R	31.9 R	32.1 R	31.7
Imports sold directly to tourists by retailers	6.2 R	5.9 R	7.0 R	7.7
Imports used in production of goods and services sold to tourists	16.6	16.5 R	16.0 R	16.5
GST on purchases by tourists	7.4	7.4 R	6.9	6.7

In the March 2003 year, direct tourism value-added and indirect tourism value-added contributed a similar level to total tourism expenditure. However, more recently direct value-added has become the more prominent component.

Direct tourism employment

Table 11 shows total full-time equivalent (FTE) persons directly engaged in tourism. These are shown in terms of paid employees and working proprietors, and are broken down into full-time and part-time positions. In the absence of hours worked data, a part-time employee is assumed to equate to 0.5 of a FTE employee. A full-time employee is defined as an employee who works 30 hours or more a week, while a part-time employee is one who works fewer than 30 hours a week.

Table 11

Direct Tourism Employment⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾

	Year ended March				Annual percentage change ⁽⁵⁾		
	2003	2004	2005	2006	2004	2005	2006
	Number				Percent		
Total employment:							
Full-time employees	1,182,600	1,224,200	1,278,100	1,329,600	3.5	4.4	4.0
Part-time employees	360,100	362,500	366,300	369,800	0.7	1.1	1.0
FTE ⁽⁶⁾ employees	1,362,700	1,405,400	1,461,300	1,514,500	3.1	4.0	3.6
Full-time working proprietors	293,000	297,900	301,700	303,200	1.7	1.3	0.5
Part-time working proprietors	64,900	67,900	75,500	76,600	4.5	11.2	1.4
FTE working proprietors	325,500	331,900	339,500	341,500	2.0	2.3	0.6
Total FTE persons engaged	1,688,200	1,737,300	1,800,700	1,856,000	2.9	3.7	3.1
Tourism employment:							
Tourism full-time employees	59,500 R	60,900	62,700	65,900	2.3 R	3.0 R	5.1
Tourism part-time employees	54,900 R	50,400 R	50,100 R	52,000	-8.3 R	-0.6 R	3.8
Tourism FTE employees	87,000 R	86,100 R	87,700 R	91,900	-1.0 R	1.9	4.7
Tourism full-time working proprietors	16,600	15,600 R	15,200 R	14,700	-6.3 R	-2.4 R	-3.0
Tourism part-time working proprietors	3,500	3,400	3,800	3,900	-2.6 R	12.7 R	3.1
Tourism FTE working proprietors	18,400 R	17,300 R	17,100 R	16,700	-6.0 R	-1.0 R	-2.3
Total FTE persons directly engaged in tourism	105,300 R	103,300 R	104,800 R	108,600	-1.9 R	1.4 R	3.6
FTE persons directly engaged in tourism as a percentage of total FTE persons engaged in New Zealand	6.2%	5.9% R	5.8%	5.9%	...	...	...

(1) Employment numbers are rounded to the nearest hundred. Individual figures may not sum to stated totals due to rounding.

(2) As a result of a change in methodology, this data is only available from 2001. For more details refer to appendix 2.

(3) Total employment numbers and tourism working proprietor numbers are sourced from the Household Labour Force Survey (HLFS) and are averages for the year ended March.

(4) Tourism employee numbers are sourced from the Quarterly Employment Survey (QES) and are averages for the year ended February.

(5) Percentage changes are calculated from unrounded employment numbers.

(6) FTE is an abbreviation for full-time equivalent.

Tourism industry ratios have been used to allocate tourism employment numbers by industry. This treatment assumes that, for each industry, a given dollar value of output will require a fixed quantity of labour input, regardless of whether the products are purchased by tourists or non-tourists.

Points to note from table 11:

- There were 108,600 FTE persons directly engaged in tourism in 2006. Direct tourism employment increased 3.1 percent between 2003–2006. Total FTE persons engaged in New Zealand increased by 9.9 percent over the corresponding period.
- The number of persons engaged in tourism does not necessarily correlate with movements in total tourism expenditure or direct value-added. In 2006, for example, direct tourism value-added increased by 1.2 percent, while FTE persons directly engaged in tourism increased by 3.6 percent. This difference may be the result of a number of factors. There may be a lag between growth in a given industry and the decisions made to employ new staff. Alternatively, there may be a shift in the number of hours worked, or in output per FTE. Furthermore, the convention of defining a part-time employee as equivalent to 0.5 of a FTE may not necessarily be a true representation of the differences in hours worked.

Tourism industry analytical measures

Tourism industry analytical measures allow for more in-depth analysis of the tourism sector, as they provide time series data on variables at an industry level allowing comparison, both across time within an existing industry and also across industries.

Table 12

Direct Tourism Value-added Per Hour Paid⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾

Industry	Year ended March					Annual percentage change			
	2000	2001	2002	2003	2004	2001	2002	2003	2004
	(\$) per hour					Percent			
Tourism-characteristic industries:									
Accommodation, cafes and restaurants	14.7	15.3	16.4	17.0	17.8	4.3	6.6	3.6	5.1
Accommodation ⁽⁵⁾	17.1	17.9	19.3	...	...	4.5	7.8
Cafes and restaurants ⁽⁵⁾	15.7	16.1	16.5	...	...	2.8	2.5
Road, rail and water passenger transport ⁽⁶⁾	17.0	16.8	18.0	17.7	18.4	-1.1	7.1	-1.8	4.0
Air transport	44.6	37.7	32.2	41.1	44.5	-15.6	-14.5	27.5	8.3
Other transport, storage and transport services	39.2	37.5	41.1	46.1	46.1	-4.5	9.8	12.1	0.1
Machinery and equipment hiring and leasing	64.4	72.4	80.0	85.6	93.2	12.5	10.4	7.1	8.9
Cultural and recreational services	31.2	31.6	34.3	34.8	36.8	1.3	8.6	1.5	5.8
Total tourism-characteristic industries	23.9	23.0	23.7	25.7	27.5	-3.8	3.1	8.3	7.2
Tourism-related industries:									
Retail trade	16.1	16.6	19.1	19.2	19.9	2.7	15.2	0.5	3.9
All non-tourism-related industries	40.6	40.8	40.3	44.7	44.6	0.6	-1.2	10.9	-0.3
Total	26.0	25.7	26.9	29.1	30.3	-1.2	4.5	8.2	4.0

(1) Gross direct tourism value-added is calculated as gross output less intermediate consumption.

(2) All values are in producers' prices.

(3) Individual figures may not sum to stated totals due to rounding.

(4) Prior to this publication, direct tourism value-added per full-time equivalent employee was calculated. For more details refer to appendix 2.

(5) Prior to 2002, the cafes and restaurants industry was combined with the accommodation industry.

(6) Road passenger, rail and water transport are combined for confidentiality reasons.

Figure 8

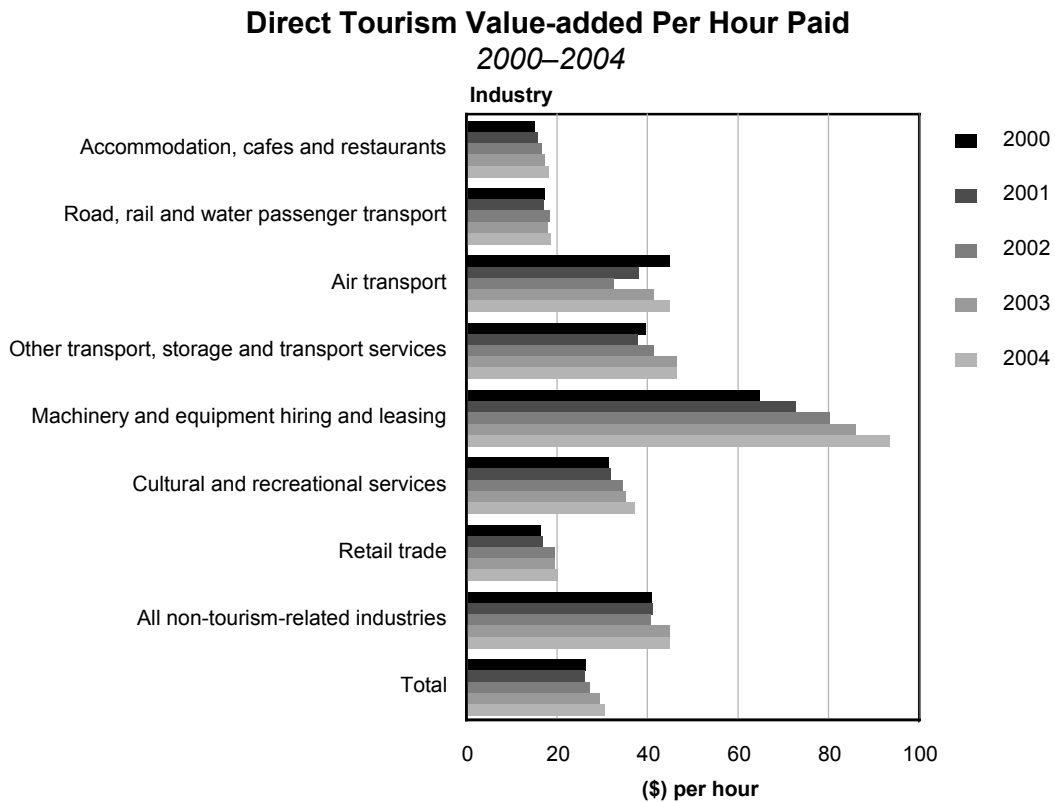


Table 12 and figure 8 show the combined labour productivity for the tourism industries and non-tourism related industries. Labour productivity is measured as direct tourism value-added divided by the number of hours paid to total persons employed in tourism. Differences in labour productivity between industries will reflect differences in capital/labour intensity, labour quality and efficiency.

Points to note from table 12:

- The average labour productivity of tourism industries was considerably lower than the average labour productivity of non-tourism related industries. Tourism is known to be more relatively labour intensive.
- In the March 2004 year, there were productivity increases in all the tourism-characteristic industries with the machinery equipment hiring and leasing industry having the highest labour productivity level. However, non tourism-related industries recorded a slight productivity decrease after strong growth in 2003.
- In the March 2004 year, the labour productivity level of tourism-characteristic industries increased by 7.2 percent. This increase consists of a 9.2 percent increase in direct tourism value-added, and a 1.9 percent increase in hours paid to total persons employed in tourism.

Table 13

Tourism Gross Operating Surplus as a Percentage of Total Tourism Output⁽¹⁾⁽²⁾

Industry	Year ended March				
	2000	2001	2002	2003	2004
	Percent				
Tourism-characteristic industries:					
Accommodation, cafes and restaurants	14.5	16.1	18.1	18.3 R	17.7
Accommodation ⁽³⁾	22.8	22.5 R	21.8
Cafes and restaurants ⁽³⁾	14.1	14.7 R	14.0
Road, rail and water passenger transport ⁽⁴⁾	12.4	8.5	13.6	11.9 R	10.9
Air transport	5.3	-0.1	-0.6	4.8 R	6.5
Other transport, storage and transport services	26.9	27.4	29.7	31.2	33.6
Machinery and equipment hiring and leasing	41.7	44.2	44.1	45.7 R	50.2
Cultural and recreational services	27.5	26.5	25.9	27.5 R	29.1
Total tourism-characteristic industries	13.7	11.4	12.9	15.8 R	17.2
Tourism-related industries:					
Retail trade	20.2	20.6	23.0	24.2 R	24.1
All non-tourism-related industries	18.9	17.5	26.0	19.8 R	19.1
Total	16.0	14.2	17.6	18.0 R	18.6

(1) Tourism gross operating surplus as a percentage of gross output is considered to be an indicator of tourism profitability.

(2) Individual figures may not sum to stated totals due to rounding.

(3) Prior to 2002, the cafes and restaurants industry was combined with the accommodation industry.

(4) Road, rail and water passenger transport are combined for confidentiality reasons.

Figure 9

Tourism Gross Operating Surplus as a Percentage of Total Tourism Output 2000–2004

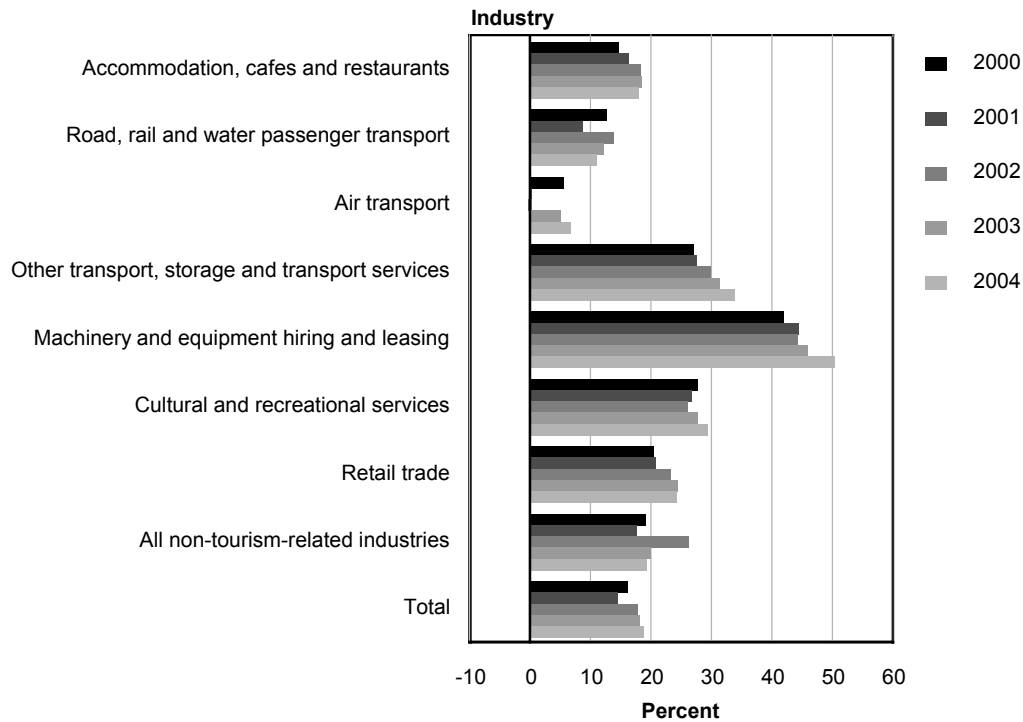


Table 13 and figure 9 show gross operating surplus as a percentage of total tourism output for tourism industries and for all non-tourism-related industries. It is one measure of tourism profitability, but reflects national accounting rather than commercial concepts. Gross operating surplus is before the deduction of interest and depreciation.

Points to note from table 13:

- For the March 2004 year, the profitability of tourism-characteristic industries (17.2 percent) was lower than for all non-tourism related industries (19.1 percent).
- Other transport, storage and transport services industry and the machinery and equipment hiring and leasing industry each recorded considerably higher profitability ratios than other tourism industries.
- Comparing 2000 with 2004, all tourism industries with the exception of road, rail and water passenger transport, have increased their profitability ratios.
- In 2001 and 2002, the air transport industry recorded a negative profitability ratio, but more recently, this profitability ratio has returned to a positive level.
- The most significant increases were in the machinery and equipment hiring and leasing industry, which increased its profitability by 8.5 percentage points (from 41.7 percent in 2000 to 50.2 percent in 2004) and other transport, storage and transport services increasing 6.7 percentage points (from 26.9 percent in 2000 to 33.6 percent in 2004). Most other industries have shown relatively smaller increases over this period.

Appendix 1

Conceptual framework

Definitions

Tourism Satellite Account 2006 has been based on the methodology produced by the World Tourism Organization (WTO) in its publication *Tourism Satellite Account – Recommended Methodological Framework*, and approved by the United Nations Statistical Commission. Reference has also been made to the methodological publications of the Organisation for Economic Co-operation and Development (OECD). These organisations have worked alongside each other to produce guidelines for the completion of tourism satellite accounts (TSAs). While they differ slightly in their recommended treatment of some conceptual issues, they generally take a similar approach, based upon concepts in the international standard *System of National Accounts 1993* (OECD 1993). Definitions used have been based on the recommendations of the WTO, with some modification for New Zealand purposes.

Tourist

A tourist is any person travelling to a place other than their usual environment for less than 12 months and whose main purpose is other than the exercise of an activity remunerated from within the place visited.

It should be noted that not all travellers (persons moving from one place to another) are tourists. They must also be travelling to places outside their usual environment (defined below) for a limited time. The 12-month time limit is analogous with the *System of National Accounts 1993* definition that a person staying in a country for longer than 12 months is a resident. A place becomes part of a tourist's usual environment after the tourist has spent more than 12 months there.

The following are not considered tourists:

- persons such as travelling salespersons for whom travel is an intrinsic part of their job
- persons who travel for the purpose of being admitted to, or detained in, a residential facility, such as a hospital, prison or long-stay care
- persons travelling as part of a shift to a new permanent location
- persons undertaking military duties
- persons travelling between two parts of their usual environment.

New Zealand TSAs cover only tourists who travel to or within New Zealand. These are classified as either domestic or international tourists. Domestic tourists are further broken down according to household, business or government travel.

Domestic tourist

A domestic tourist is a New Zealand resident who travels within New Zealand outside their usual environment. While travelling, they do not stay in any one place for more than 12 months.

- A domestic **household** tourist is a domestic tourist whose purpose of visiting is other than to carry out a business activity.
- A domestic **business** tourist is a domestic tourist and an employee of a private sector enterprise whose purpose of travel is to carry out a business activity and whose expenses are met either in full or in part by their employer.
- A domestic **government** tourist is a domestic tourist and an employee of a central or local government sector enterprise whose purpose of travel is to carry out a business activity and whose expenses are met either in full or in part by their employer.

International tourist

An international tourist is a person who travels to a country other than that in which they have their usual residence, and outside their usual environment. While travelling, they do not stay in any one place for more than 12 months.

For the purposes of a TSA, international tourists are made up exclusively of inbound travellers (non-residents travelling in New Zealand). Following the publication of *Tourism Satellite Account: Revised Treatment of International Students*, international students studying in New Zealand for less than 12 months are now

included in the scope of the TSA. All their expenditures – airfares, course fees, and accommodation and living expenses – are included in international tourism expenditure. International students studying in New Zealand for more than 12 months are excluded from the TSA because they are considered to be residing in their usual environment within New Zealand. Such students are treated as tourists only if they travel outside their usual environment within New Zealand. However, in practice it is difficult to estimate this expenditure, and it is therefore excluded.

Usual environment

Usual environment is the place or places a person occupies within their regular routine of life (excepting places visited for leisure or recreational activities only).

It is the concept of 'usual environment' that defines a tourist. Tourists must be travelling outside their usual environment for their expenditure to be considered part of tourism demand.

A particular destination will benefit from the goods and services purchased by tourists travelling outside their usual environment by the amount spent by the tourist at that location, excluding imports. The important link between usual environment and tourism is that tourists, in purchasing goods and services outside of their usual environment, have a positive economic impact on that destination. This benefit would not have occurred without tourism. This is the basis of tourism expenditure and is the reason a TSA excludes expenditure by outbound New Zealand travellers on foreign-produced goods and services. In other words, the economic benefits that accrue from these travellers do not benefit New Zealand.

However, expenditure by outbound tourists on domestically produced services (for example, international flights on New Zealand carriers, New Zealand travel agents' booking fees, or travel insurance for outbound trips) is included within the TSA because it is a form of tourism and provides economic benefit to the New Zealand economy.

The concept of usual environment is difficult to define because it depends on the nature of the country in question. For this reason, the WTO has not recommended a complete definition. Instead, it suggests possible criteria to be used by countries to establish their own definitions.

In New Zealand's case, for a tourist to be outside their usual environment they must, subject to previously stated exclusions, satisfy at least one of the following conditions:

- travel by a scheduled flight or inter-island ferry service
- travel more than 40 kilometres from their residence (one way) and travel outside the area they commute to for work or visit daily
- travel as an international tourist.

Information from the Domestic Travel Survey (DTS) was also collected on this basis.

Tourism expenditure

Tourism expenditure is spending by, or on behalf of, a tourist before, during and after a trip. This expenditure occurs either on the trip (for example, meals or souvenirs), or is travel related (for example, pre-booked airfares, luggage or other tourism-specific durables). The trip must be taken outside the usual environment of the tourist. This expenditure includes goods and services tax (GST).

Central to the definition of tourism expenditure are the concepts of 'tourist' and 'usual environment', as defined above.

Tourists are defined based on their relationship to their usual environment. Therefore, expenditure on a product may constitute tourism expenditure, depending on who is purchasing the product. Tourism expenditure is defined from the point of view of the tourist.

On-trip tourism expenditure is tourism expenditure occurring during a trip. Off-trip tourism expenditure is expenditure that occurs outside of a trip but relates to goods and services purchased specifically for use while on a trip.

Direct tourism demand

Direct tourism demand is GST-exclusive expenditure made by, or on behalf of, a tourist before, during and after a trip. This expenditure occurs either on the trip or is travel related. The trip must be taken outside the usual environment of the tourist. In other words, direct tourism demand is equivalent to tourism expenditure, excluding GST.

For a product to be directly demanded (or directly purchased), there must be direct contact between the tourist and the producer of that product. Generally, this direct contact is a direct physical contact (for example a tourist buys a meal from a restaurant). However, in the case of products purchased by tourists from retailers, the direct contact concept is expanded to include a strong economic link between tourist and producer. This means that direct tourism demand resulting from a tourist's purchase of a product includes:

- the margin (or 'mark-up') of the retailer selling the product
- the margin charged by the wholesaler
- the amount received by the manufacturer.

In other words, the full (GST-exclusive) purchase price of the product is included in direct tourism demand.

Indirect tourism demand

Indirect tourism demand is the value of intermediate inputs used in the production of goods and services sold to tourists. In national accounting terms (for definitions, see the glossary), it is the intermediate consumption incurred in producing the goods and services included in direct tourism demand.

Indirect tourism demand results from purchases by the producer of goods and services sold to tourists (that is, from direct tourism demand). For example, when a visitor buys a meal in a restaurant, the direct tourism demand is the cost of the meal. The meal's indirect tourism demand is generated from the purchase of intermediate inputs used by the restaurant in preparation of that meal – the purchase of meat and vegetables, electricity for cooking, and so on. Producers of these inputs have no direct relationship with the tourist.

Indirect tourism demand does not include travel agents' commissions, even where these are paid by transport or accommodation providers to travel agents. Instead, this expenditure is included in direct tourism demand (and in business travel expenditure) because it is assumed these commissions are paid to travel agents by transport or accommodation providers on behalf of tourists. Travel agents' commissions received directly from fares booked are also included in direct tourism demand.

Valuation basis used in tourism satellite accounts

Tourism expenditure in TSAs is initially measured in purchasers' prices (market prices). Essentially, purchasers' prices are the amounts paid by tourists for products. Tourism expenditure is then converted into producers' prices for incorporation into the input-output framework of the TSA. Producers' prices are the amounts producers receive for selling their products. For this reason, they are exclusive of GST. All monetary aggregates presented in a TSA are in producers' prices, unless otherwise stated.

Some valuation issues exist in comparing the New Zealand TSA with the TSAs of other countries. This is because the New Zealand System of National Accounts (NZSNA) and TSAs measure industry value-added in producers' prices, while Australia and other countries measure industry value-added in basic prices, or at factor cost. This means that international comparisons can be slightly misleading, as industry value-added estimates are on a different valuation. (For definitions of basic, producers' and purchasers' prices, see the glossary.)

It is important to emphasise that the direct tourism value-added valuation is consistent with the value-added generated by industries in the NZSNA, as this value-added is also measured in producers' prices.

Tourism products

The tourism product ratio

The tourism product ratio is the proportion of the supply of a product or service consumed by tourists. It provides the means of classifying tourism products outlined below.

Classifying products sold to tourists

TSAs make a distinction between three categories of products:

- A **tourism-characteristic** product is one that would cease to exist in meaningful quantity, or for which the level of consumption would be significantly reduced, in the absence of tourists. A product is classified as a tourism-characteristic product if at least 25 percent of its production is purchased by tourists (that is, a tourism-characteristic product has a tourism product ratio greater than or equal to 0.25).

- A **tourism-related** product is distinct from a tourism-characteristic product in that tourists consume a smaller proportion of the total supply of the product. For a product to be classified as a tourism-related product, tourists must purchase between 0 and 25 percent of its production (that is, a tourism-related product has a tourism product ratio that is greater than 0 and less than 0.25).

Note: A tourism-specific product is either a tourism-characteristic product or a tourism-related product.

- A **non-tourism-related** product is a product that is not tourism-specific. It is assumed in the New Zealand TSA that none of these products are purchased by tourists.

A full list of tourism-characteristic and tourism-related products is presented in appendix 3: Tourism product classification.

The criteria for categorising products are derived from the WTO's recommended treatment, while the product classification used is based on the *Australia and New Zealand Standard Commodity Classification*.

When looking at product classifications, the following points are important to consider:

- The main purpose of making the distinction between categories of products is for presentation and analytical purposes. It allows analysis to be specifically focused on the products that make up the majority of tourism expenditure.
- Tourism products are not exclusively consumed by tourists. A non-tourist can consume a tourism-characteristic product. Rather than providing a robust set of products exclusively consumed by tourists, tourism product classifications provide a way of identifying an industry's supply of products consumed by tourists.

Note: Constraints on the availability of input data for provisional accounts means that a regrouping of tourism-characteristic and tourism-related products is necessary. (See table 14 in appendix 3: Tourism product classification.)

Industries producing tourism products

The tourism industry ratio

The tourism industry ratio is the proportion of an industry's output consumed by tourists. It provides the means of classifying industries outlined below.

Categorising industries producing tourism products

A **tourism-characteristic** industry is one where either:

- at least 25 percent of the industry's output is purchased by tourists (that is, the tourism industry ratio is greater than or equal to 0.25); or
- the industry's characteristic output includes a tourism-characteristic product. For example, less than 25 percent of the water transport industry's output is consumed by tourists, but its characteristic outputs are water freight transport and water passenger transport. Water passenger transport is a tourism-characteristic product, so the water transport industry is classified as a tourism-characteristic industry and a direct physical contact occurs between the industry and the tourist buying its products. As a result, manufacturing and wholesaling industries are not tourism-characteristic industries.

A **tourism-related** industry is one where:

- The industry is not a tourism-characteristic industry.
- Between 5 percent and 25 percent of the industry's output is purchased by tourists (that is, the tourism industry ratio is greater than 0.05 and less than 0.25).
- A direct physical contact occurs between the industry and the tourist buying its products. As a result, manufacturing and wholesaling industries are not tourism-related industries.

In practice, the retail trade industry is the only tourism-related industry.

A **non-tourism-specific** industry is any industry that is not a tourism-characteristic industry or a tourism-related industry. However, a non-tourism-specific industry may still sell some of its products to tourists.

The following points relate to the TSA industry classification:

- The industries are consistent with the published industries within the NZSNA.
- The classification of industries outlined above has no effect on the value of direct tourism value-added. This is because direct tourism value-added is determined by the scope of total tourism direct demand, regardless of the classification of the industry. The tourism-characteristic and related industries are identified for extra emphasis in this TSA because they are significantly involved in tourism.

Note: Constraints on the availability of input data for provisional accounts mean that supply by product and value-added are shown only for characteristic tourism industries and for all other industries. (See appendix 4: Tourism industry concordance, for detailed listings.)

Value-added

Value-added is the 'value' that a producer adds to the raw material goods and services it purchases in the process of production. This can be shown as:

intermediate inputs (purchased raw materials and services)
plus value-added
equals output (produced goods and services)

Clearly, the value-added of a business is less than the value of its output.

Value-added is made up of several components:

- Compensation of employees – the cost of employing labour used to produce output.
- Gross operating surplus – the surplus or deficit accruing from production before taking account of any interest or rent payable on financial or tangible non-produced assets borrowed or rented by the enterprise, any interest or rent receivable on financial or tangible non-produced assets owned by the enterprise, or the depreciation of capital used in production (that is, consumption of fixed capital).
- Net taxes on production and imports – taxes payable (less subsidies receivable) on goods and services when they are produced, plus taxes and duties on imports that become payable (less subsidies receivable) when goods enter the country.

Direct tourism value-added

Direct tourism value-added is the value-added by producers from the production of goods and services directly sold to tourists. This results in a measure of the contribution of tourism to gross domestic product (GDP) that is consistent with that measured for other industries in the economy.

Indirect tourism value-added

Indirect tourism value-added is the total value-added resulting from indirect tourism demand. Indirect tourism value-added equals indirect tourism demand, minus imports used in the production of goods sold to tourists.

Relating direct tourism value-added and tourism expenditure

It is important to distinguish between two related concepts: total tourism expenditure and direct tourism value-added. The two differ in both concept and scope.

Tourism expenditure equals output sold to tourists, plus imported goods directly purchased by tourists. Direct tourism value-added, on the other hand, equals the value of goods and services produced domestically and consumed by tourists, less the value of intermediate inputs required to produce these goods and services.

The relationship between these concepts can be summed up as follows:

Total tourism expenditure
less GST
equals direct tourism demand
less direct tourism value-added
less imported goods purchased by tourists from retailers
equals indirect tourism demand
less imports used in production of goods/services sold to tourists
equals indirect tourism value-added.

Appendix 2

Methodology

Direct tourism value-added

Tourism expenditure and direct tourism value-added (or tourism's contribution to gross domestic product (GDP)) are the two major economic aggregates derived in a Tourism Satellite Account (TSA).

Tourism expenditure measures the value of products purchased by visitors, whether purchased before, during or after travel.

Direct tourism value-added measures the value of the output of tourism products by industries, less the value of intermediate inputs used in producing those products. When summed across all industries it shows the direct 'value-added' to the economy by the tourism industry.

Tables 4, 6, 7 and 8 detail the process used to measure direct tourism value-added. This involves the following steps:

- Table 4 presents tourism expenditure by type of product. (It is further dissected by type of tourist in table 6.)
- Tourism expenditure by type of product is matched with the total supply of products in the annual supply-use tables of the New Zealand economy. The tourism product ratio for each product is derived by dividing the value of tourism expenditure by total supply.
- Each industry's supply by product is multiplied by the tourism product ratio, to calculate tourism supply by industry. Table 7 presents tourism supply for tourism-characteristic industries, all other industries and for imports.
- Tourism supply is then divided by total output by industry, to give tourism industry ratios – the proportion of each industry's total output that is purchased by tourists.
- The tourism industry ratios are multiplied through each industry's production account to obtain total tourism value-added. Table 8 presents total tourism value-added resulting from tourism-characteristic industries and all other industries.

The same methodology underlies the calculation of direct tourism value-added for final and provisional accounts, and is ordered according to the steps above. However, the derivation of inputs into the calculation process and the level at which calculations are performed differ between final and provisional accounts. There are three main reasons for this:

- The lack of balanced supply-use results for the provisional accounts limits the level at which expenditure by product can be calculated for business and government travellers.
- The same constraints apply to the supply of tourism products. The absence of balanced supply-use accounts means the supply of each product by industry cannot be derived reliably at the same level of detail as in a final account.
- The industry production accounts, and therefore industry value-added, are provisional and have not been balanced within a supply-use framework to derive a final GDP figure.

Differences in the derivation of input data for final and provisional accounts are outlined below.

Calculating tourism expenditure

Table 6 presents tourism expenditure by product by type of tourist: international, household, and business and government. A description follows of how expenditure by the three types of tourist was calculated.

International tourism expenditure

Final accounts

Expenditure by overseas tourists in New Zealand is derived from the International Visitors Survey (IVS) published by the Ministry of Tourism. This sample survey is extrapolated up to full population estimates using migration data. The IVS data is also supplemented with breakdowns from balanced supply-use accounts, Consumers Price Index (CPI) weightings and tourism producers' own data. In some instances, tourism producers are able to provide estimates of the proportions of their output consumed by international visitors.

Broad level valuations of international visitors' expenditure in New Zealand are derived from transportation and travel services items in the balance of payments (BoP). IVS data is a major source for BoP statistics, but a number of supplementary sources are also used to compile these statistics. TSA totals are obtained after excluding persons who are visiting New Zealand specifically to obtain medical treatment (an adjustment needed because of a conceptual difference between TSA and BoP statistics). These totals are then broken into tourism products. The initial breakdown comes from the IVS, which groups expenditure into 10 major groups (for example, transport, meals, sightseeing). These expenditures are then further split into TSA tourism products, using proportions from balanced supply-use accounts. These splits are compared with other data sources, and refinements made where additional estimates are available.

Provisional accounts

The same basic data source, the IVS, is also used in the provisional accounts. However, in the absence of supply-use tables, the IVS is not broken down to the same level of product detail found in final accounts. The breakdown derived for the latest final account is used to derive the initial product breakdown for the provisional years. This initial product breakdown is subsequently refined during the balancing process (covered in more detail later in this appendix, see 'Balancing tourism expenditure and tourism production').

Tourism expenditure by international students

All years from 1999

Tourism expenditure by international students studying for less than 12 months in New Zealand is calculated using the following steps:

- Total international student numbers are obtained from the Ministry of Education and the Survey of English Language Providers. The latter is an annual Statistics New Zealand survey that collects information on the expenditure of international students studying at New Zealand English language schools, categorised by tuition and other fees.
- The number of international students studying in New Zealand for less than 12 months is derived as a proportion of total student numbers using short-term passenger arrivals visiting New Zealand for education or medical purposes.
- Expenditure on course fees is calculated using Education New Zealand data. The Education New Zealand data is a census of international students studying in New Zealand. It includes average course fees for students studying at schools, tertiary education institutes, and private tertiary educators (such as English language schools).
- Expenditure on living costs (including accommodation costs) is assumed to be equivalent to expenditure on course fees, on a per student basis.
- Expenditure on airfares by students in New Zealand for less than 12 months is calculated by multiplying the numbers of students in New Zealand for less than 12 months, as a proportion of total international arrivals, by the total airfare income of resident airlines from the BoP.
- Total tourism expenditure by international students in New Zealand for less than 12 months is the sum of expenditure on course fees, living costs and airfares.

Household tourism expenditure

Household tourism expenditure, shown as household demand in table 6, consists of four components. These are:

1. Household domestic travel expenditure

The Domestic Travel Survey (DTS) measures expenditure and behaviours of domestic travellers within New Zealand, and provides valuable information on the nature of domestic travel activity, including the origin and destination of domestic travellers. DTS data collection commenced in 1999, and is available as both a quarterly and annual series.

The DTS data supplied by the Ministry of Tourism to Statistics New Zealand is categorised by purpose of travel, expenditure type, and length of trip (either day trip or overnight trip). The four purposes of travel are holiday, visiting friends and relatives, business, and other. The eight expenditure categories are transport, accommodation, food, alcohol, gifts and souvenirs, recreation, other shopping, and gambling. Therefore, DTS expenditure levels are available by purpose of travel, expenditure category, and length of trip.

Final accounts

The DTS is a key data source in the calculation of domestic household expenditure in the TSA. The data obtained from the DTS is supplemented with data from the Household Economic Survey (HES) and other data sources.

The DTS business expenditure data is partly used, in addition to the other three DTS travel purpose types, to estimate TSA domestic household expenditure. For each of the eight expenditure categories mentioned above, a predetermined proportion of the DTS business expenditure is included within TSA domestic household expenditure. For example, 67 percent of the DTS business expenditure on alcohol is considered to be within the scope of TSA domestic household expenditure, which reflects the business tourist paying for 67 percent of their alcohol consumption without being compensated by their organisation. The remaining 33 percent is considered to be consumption for which the business tourist is compensated by their organisation, and is therefore not classified as TSA domestic household expenditure.

The DTS does not capture all types of household tourism expenditure, and is incorporated into tourism products which aggregate to approximately 80 percent of domestic household expenditure in the TSA. The remaining 20 percent is calculated using separate estimates for outbound travel purchased from New Zealand resident firms, off-trip purchases of tourism-specific consumer durable goods, and imputed rental on holiday homes.

Provisional accounts

Total domestic household expenditure for provisional March years is calculated by applying movements in the annual March year DTS data to the latest final account domestic household expenditure values. Other data sources, such as annual reports and the HES, are also incorporated into the calculations. This mechanism provides the initial product expenditure levels, which are subsequently modified during the balancing process (covered in more detail later in this appendix, see 'Balancing tourism expenditure and tourism production'). The DTS does not capture all types of household tourism expenditure, so separate estimates are made for outbound travel purchased from New Zealand resident firms, off-trip purchases of tourism-specific consumer durable goods, and imputed rental on holiday homes.

2. Outbound travel purchased from New Zealand resident firms

Final accounts

Household tourism expenditure in the TSA includes expenditure on overseas travel, where New Zealanders purchase New Zealand-produced goods and services. This expenditure includes fares paid to resident air carriers for flying a household tourist overseas, commissions paid to resident travel agents for booking household outbound travel, pre-paid travel insurance, and vaccinations needed by household outbound tourists. This expenditure is estimated from a variety of sources, including BoP data, the HES, and company annual reports.

Provisional accounts

Household outbound tourism expenditure for provisional accounts is calculated by using product breakdowns from the latest final account, to split household consumption expenditure groupings. For example, household tourism expenditure on travel insurance is held as a constant proportion of total household consumption expenditure on insurance. Annual movements in the appropriate household consumption expenditure category are used to estimate expenditure, based on the latest final account. Expenditure estimates are subject to modification during the balancing process (covered in more detail later in this appendix, see 'Balancing tourism expenditure and tourism production').

3. Off-trip purchases of tourism-specific consumer durable goods

Final accounts

Off-trip expenditure by households on tourism-specific consumer durables (such as tents and sleeping bags) is included in household tourism expenditure. These off-trip purchases are based on data from the HES and are calculated in addition to the on-trip purchases of these goods. Off-trip tourism expenditure is defined in appendix 1. Further discussion on consumer durables in the TSA may be found in 'Special treatments' later in this appendix.

Provisional accounts

Domestic household purchases of tourism-specific consumer durables for provisional accounts are calculated by using household consumption expenditure groupings to split products down to a detailed level. Annual movements in the household consumption expenditure groupings are used to estimate expenditure at the detailed product level, for each provisional account. The detailed product level is then aggregated back up, eventually to the published tourism product level. Expenditure estimates are subject to modification during the balancing process (covered in more detail later in this appendix, see 'Balancing tourism expenditure and tourism production').

4. Imputed rental on holiday homes

All years

The TSA includes an imputed rental on dwellings owned by households that are used as holiday homes. The total number of holiday homes is calculated using data from population censuses. The imputed weekly rental price is calculated using census data, movements in the appropriate consumers price index, and accommodation survey occupancy rates. This is multiplied by the number of weeks in the year to give an annual imputed rental price. The number of holiday homes is then multiplied by the annual imputed rental price to give the total imputed rental value.

Business and government travel expenditure

Final accounts

Business travel expenditure is drawn from intermediate consumption by product of the private sector industries in the balanced supply-use accounts. This is supplemented by other data sources, including the Annual Enterprise Survey. DTS business expenditure data are not used to derive the TSA business expenditure estimates. To avoid double-counting, the DTS business expenditure categories that are included within TSA domestic household expenditure (such as the 67 percent of the alcohol category mentioned earlier in this appendix, see 'Household tourism expenditure') are not incorporated into the TSA business expenditure estimates.

Travel expenditure by central government agencies and departments (that is, non-market units) is calculated by directly surveying a sample of agencies and applying the results across all government agencies. Travel expenditure by central government market units uses the same supply-use method as for business travel.

Travel expenditure by local authority non-market units is calculated by directly surveying a sample of agencies and applying the results across all local authority non-market units. Travel expenditure by local government market units uses the same supply-use method as for business travel.

Provisional accounts

Travel expenditure is part of the intermediate consumption of businesses and government. In the absence of balanced supply-use accounts, intermediate consumption is first derived using a variety of data sources, including GST purchases, annual reports and results from the Annual Enterprise Survey. The ratio of travel expenses to total intermediate consumption from the latest final account is then applied. This provides the initial product breakdown, which is subsequently modified during the balancing process (covered in more detail later in this appendix, see 'Balancing tourism expenditure and tourism production').

As with the final accounts, DTS data are not used in estimating TSA business and government expenditure.

Production of tourism goods and services

Final accounts

Analysing the production of tourism-characteristic and tourism-related products starts with the production accounts by industry underlying the supply-use balancing process. Within the balanced supply-use accounts, each industry's output and intermediate consumption are broken down into products. Final demand categories such as household consumption expenditure and exports are also broken down by product. For the TSA, output product data from balanced supply-use accounts are rearranged to focus on tourism-characteristic and tourism-related products. Total sales by each industry are arranged into tourism-characteristic, tourism-related and non-tourism-related products.

Provisional accounts

Constraints on the availability of data for provisional accounts (no balanced supply-use results available) mean that supply by product is shown only for characteristic-tourism industries and for all other industries. Without balanced supply-use accounts, total output by industry is derived using a variety of indicators, including GST sales, the Retail Trade Survey, the Annual Enterprise Survey, the Accommodation Survey and annual reports. This output is then broken down into the supply of tourism products using the latest final account breakdown of output by product and industry. This provides the initial product breakdown, which is subsequently modified during the balancing process (covered in more detail in 'Balancing tourism expenditure and tourism production', see below).

Balancing tourism expenditure and tourism production

Final accounts

Supply-use balancing is an established and integral process in the compilation of the national accounts. It is used, in the words of the *System of National Accounts 1993*, (OECD 1993) "for checking the consistency of statistics on flows of goods and services obtained from quite different kinds of statistical sources". The supply-use balancing process applies rigorous examination to diverse data sources, reconciling them in a framework that reduces the error margins implicit in these individual data sources. The supply-use approach provides the best framework to bring the demand and supply sides of the economy into balance. The usual process is to confront supply and demand by product, and perform adjustments so that the value of the supply of each product is equal to the value used. Adjustments are made to either supply or demand, depending on the relative strength of each data source. In doing so, the potential for errors that may result from the use of a single data source, either supply- or demand-based, is reduced. Similar checking of supply and use by product, which underlie Statistics New Zealand annual supply-use models, was also performed in the TSA. The TSA begins with the balanced supply-use tables, that is all products have been balanced in terms of their total supply and total use. These 'product accounts' are broken down further into their tourism and non-tourism components. The resulting tourism supply and tourism use may no longer be balanced, as a consequence of the methodology used to make this split. The same type of data confrontation used in supply-use balancing is then used in the TSA to ensure that tourism supply is equal to tourism use.

The following is a typical example of how this process is undertaken.

1. Compare the total supply of tourism-characteristic and tourism-related products with the total direct tourism demand and non-tourism demand for these products. This comparison identifies areas where the tourism product ratio is unexpected or obviously incorrect. Note that GST is deducted from tourism expenditure for the purposes of this comparison – so production for and expenditure on tourism products are both valued in producers' prices.
2. Re-examine the methodology used, checking for errors, conceptual inconsistencies and methodological problems.
3. Compare the strength of the respective supply and demand side data sources, identifying areas where particular strengths and weaknesses lie. Typically, the strengths are in the supply-side industry and product data, and the total demand by type of tourist data. Demand for individual products is often considered to be of weaker quality.

The focus is to strengthen the breakdown of total tourism expenditure types into products. The first step is to look for any extra data sources to provide indications of what these should be. Where possible, changes are incorporated. In areas where no data is available, iterative changes are made to these products, keeping particular areas of confidence 'locked'. This process is continued until the ratios for each product come into line with expectations. The outcome of the balancing process is a strengthened analysis and a complete set of tourism product ratios, that is the proportion of the supply of products that make up tourism demand. The tourism industry ratios, and thus tourism value-added, are derived from these.

Provisional accounts

The same checking of supply and use by product that underlies Statistics New Zealand's annual supply-use analysis is also performed in the provisional accounts. However, due to data constraints, the process is at a more aggregated product level. Furthermore, the relative strengths of supply and use data sources are quite different between provisional and final accounts.

Calculating direct tourism value-added

Derivation of the tourism product ratio

Tourism consumption for each product is divided by total supply to give the tourism product ratio. The tourism product ratio measures the proportion of output of a product used by tourists.

Derivation of tourism supply and the tourism industry ratio

Calculation of tourism supply and the tourism industry ratio for each industry is an important intermediate step in the derivation of direct tourism value-added and employment.

Tourism supply by product by industry is derived by applying the tourism product ratio (from table 6) to the supply of that product by each industry. Total tourism supply by each industry is then calculated by summing tourism supply of all products.

For example, the tourism product ratio for accommodation services was applied to the output of all industries supplying this product. This gave tourism supply of accommodation services by each industry. This exercise was carried out for all products. Tourism supply by each industry was then divided by total industry output, to give the tourism industry ratio.

While the calculation of these variables is an important step in deriving direct tourism value-added, neither the tourism industry ratio nor tourism supply by industry is shown in provisional accounts. This is because these values are themselves derived from total output by industry, and no official measure is available in these years. Table 7 shows total supply and tourism supply by product for tourism-characteristic and all other industries.

Derivation of direct tourism value-added

The tourism industry ratio is applied to the production account for each industry to obtain direct tourism value-added.

Production accounts by industry are not published for provisional years. Therefore, before tourism value-added can be calculated, provisional production accounts for each industry are derived. Data from a variety of sources, including GST sales and purchases, annual reports and the Annual Enterprise Survey, are used to break down the latest published total value-added to give value-added by industry.

Final TSA account tables present full production accounts, as well as tourism production accounts by industry. Direct tourism value-added in provisional TSA accounts is shown split by tourism-characteristic and all other industries. This presentation reflects the less detailed nature of total value-added by industry in those years, within which tourism value-added is derived as a subset.

A major assumption is made in the compilation of the TSA relating to the use of the tourism product ratio and the tourism industry ratios. The industry technology assumption is that the input requirements of tourism and non-tourism products are identical for an industry. That is, if 50 percent of the output of an industry is made up of goods and services sold to tourists, then 50 percent of its inputs are used to produce those tourism goods and services. This is likely to be a more valid assumption for an industry that makes a range of products that are very similar, requiring similar inputs. However, in some instances the assumption is likely to be less valid, for example where an industry has a low degree of tourism specialisation, and a diverse range of products are produced.

An alternate assumption is to relate specific inputs to outputs, that is a product technology assumption. However, this approach is not easily implemented due to the lack of sufficiently detailed product data. Industry data, on the other hand, is far more readily available. Both the industry and product technology assumptions are sanctioned by the WTO.

Direct tourism employment

All years from 2001

Direct tourism employment, see table 11, is derived by applying tourism industry ratios to the number of persons engaged in each industry. This approach produces a value for the number of persons engaged in each industry as a result of tourism.

Employee numbers (full-time persons engaged, part-time persons engaged and full-time equivalent persons engaged) by each industry are sourced from the Quarterly Employment Survey (QES). Exceptions are

the water transport and agriculture industries, as employment for some parts of these industries is not surveyed in the QES. Employee numbers for these industries are taken from the Household Labour Force Survey (HLFS).

Working proprietor numbers (full-time persons engaged, part-time persons engaged and full-time equivalent persons engaged) by each industry are sourced from the HLFS. The QES is not suitable as a data source because it counts only those working proprietors with employees.

Prior to the Tourism Satellite Account 2004, the tourism employment series was compiled mainly from the Annual Frame Update Survey (AFUS). However, since 2003 the AFUS has been unable to provide a comprehensive full-time/part-time employment number split. As a consequence, the TSA tourism employment series from 2004 use data from the QES and HLFS. The new series is currently available for all years from 2001.

Tourism industry analytical measures

Two analytical measures are used to calculate the productivity and profitability of tourism industries.

Direct tourism value-added per hour paid indicates labour productivity with differences between industries reflecting factors such as the varying labour/capital intensity; labour quality, and technological differences. There are multiple methods available in producing tourism productivity estimates. The method adopted in this TSA uses one of these approaches, therefore caution should be used when interpreting tourism productivity estimates.

Tourism gross operating surplus as a percentage of total tourism output is one measure of tourism profitability but reflects national accounting rather than commercial concepts. It is worth noting that gross operating surplus is before interest and depreciation.

Tourism hours paid has been derived values using information sourced from the Business Demography survey, censuses, HLFS and QES.

Indirect effects of tourism

Indirect imports and tourism value-added

As described in appendix 1 (relating direct tourism value-added and tourism expenditure), the basis of a TSA's measure of indirect tourism value-added (or tourism's indirect contribution to GDP) is:

	Total tourism expenditure
less	GST
equals	direct tourism demand
less	direct tourism value-added
less	imported goods purchased by tourists from retailers
equals	indirect tourism demand
less	imports used in production of goods/services sold to tourists
equals	indirect tourism value-added.

The derivation of imports used in production of goods and services sold to tourists and indirect tourism value-added are discussed below.

Imports used in production of goods and services sold to tourists

Indirect tourism imports represent those imported products not directly sold to tourists, but used in producing tourism supply.

All years

The value of imports used in production of products sold to tourists is calculated using the table of cumulated import coefficients of industries and categories of final demand from input-output tables for 1996 (IO96), the most recent cumulated import coefficients table available. This may be updated when the relevant tables from more recent years become available. The cumulated imports coefficients table shows how many units of imports are required for an industry to produce a unit of output. Tourism supply by industry is derived as part of the direct tourism value-added calculation. Multiplying this supply by the relevant import coefficients by industry will produce the value of imports used in production of goods and services sold to tourists.

Indirect tourism value-added

Indirect tourism value-added may be calculated directly using an input-output model, or derived indirectly as a residual item. The indirect method calculates total tourism expenditure (excluding GST) then subtracts direct tourism value-added, imports directly sold to tourists by retailers, and imports used in the production of goods and services sold to tourists.

Final accounts

Indirect tourism value-added is calculated directly using the table of industry by industry total requirements from IO96, the most recent total requirements table available.

Provisional accounts

Indirect tourism value-added is derived using the subtraction method, after first deriving imports used in production of goods and services sold to tourists. The advantage of this method is that it is simpler, does not require multiple iterations, and industry total value-added is a less critical input.

Indirect tourism employment

Numbers of full-time equivalent persons (FTEs) indirectly engaged in tourism are presented in table 3.

Final accounts

Indirect tourism employment takes, as its starting point, indirect tourism value-added by industry. The ratio of indirect tourism value-added to direct tourism value-added is calculated, and multiplied by direct tourism employment, to give indirect tourism employment by industry. These industry estimates were summed to calculate total FTEs indirectly engaged in tourism.

Provisional accounts

For provisional years, neither direct tourism value-added nor indirect tourism value-added is available by industry in the NZSNA. Therefore, the ratio of total tourism indirect tourism value-added to total direct tourism value-added, by industry, is calculated for the latest final year. This is multiplied by total direct tourism employment, to give total FTEs indirectly engaged in tourism.

Supply-use framework

Final accounts

A TSA is a rearrangement of the NZSNA. More specifically, the tables for final accounts are derived from the annual supply-use tables of the New Zealand economy for those March years. Supply-use tables provide a statistical and economic representation of the economy, broken down by industry, product, primary input category (for example, compensation of employees, consumption of fixed capital) and final demand category (such as household consumption expenditure and exports). By adopting the supply-use framework, a 'tourism industry' can be presented in the same way as industries such as agriculture and manufacturing. It is then possible for tourism to be compared with other industries and with total national accounts aggregates, such as GDP.

Additionally, by compiling the TSA within a supply-use framework, derived tables may be produced that allow further analyses. For example, an 'impact analysis' can be completed, which allows the user to trace the direct and indirect impact of tourism expenditure on the economy. This shows the flow-on effects of tourism, as expenditure on tourism products impacts first on industries directly supplying tourists, and then on industries that provide indirect inputs to the industries supplying tourists.

The supply-use structure also allows financial data on tourism to be easily linked to non-financial data such as employment. Balanced supply-use accounts provide detail at the product level of both the structure of industry output (supply), as well as the demand for these products by business and final demand categories (for example household spending). They are the starting point from which a TSA is derived.

Provisional accounts

Balanced supply-use accounts are not yet available for provisional years. Only total economy-wide value-added has been published for these years. Therefore, values of the supply of products sold to tourists by industry are calculated. This involves:

- Deriving the output of each industry (as outlined earlier in this appendix).
- Breaking down total output into supply of each tourism product using the industry output breakdown from the latest available supply-use analysis. This provides the initial product breakdown, which is subsequently modified during the balancing process.
- Calculating value-added by industry within the constraint of published total value-added.

The absence of balanced supply-use accounts results in less robust estimates of tourism value-added for these later years.

Special treatments

This section details a number of areas in TSA methodology that receive special treatment.

Treatment of the margin

In the national accounts, purchases of retail goods are effectively split into two components – the amount paid by retailers for goods and the retailers' margins added to these prices. The treatment adopted in a TSA is that the full gross value of the retail product purchased is shown as direct tourism expenditure, that is, the full purchase price of the item bought is recorded as direct demand. This means that although there must be an economic relationship between the supplier and the tourist, a physical relationship is not necessary.

For example, a tourist purchased a jersey for \$100, of which \$10 was the mark-up for the retailer (who has direct contact with the tourist), \$15 was the wholesaler's mark-up, and \$75 was the manufacturing value of the product. The full \$100 purchase price of the product is considered direct tourism demand in the TSA. Therefore, the contribution to GDP of wholesalers and manufacturers who supply retailers with goods sold to tourists will also be classified as direct tourism value-added.

Consumer durables

Two types of expenditure on consumer durables are included in tourism expenditure in a TSA, consistent with WTO recommendations:

- All consumer durables acquired on a trip are included in tourism demand. This includes the purchase of high-value consumer durables during a trip, such as motor vehicles, even though the primary purpose may not be for tourism use. The estimate of purchases of motor vehicles by households while on trips is related to the proportion of New Zealanders living in rural areas. This is based on the assumption that rural residents will travel outside their 'usual environment' (defined in appendix 1) to purchase a motor vehicle. It is recognised that, in practice, the usual environment for a rural New Zealander may well include urban areas that fall outside the strict TSA definition of 'usual environment'. While the measurement makes some attempt to take this into consideration, there is little hard data with which to refine it. As a result, these estimates may be revisited in the future.
- Off-trip purchases of a specific range of consumer durables with a very high tourism usage are included. For example, luggage and tents are acquired primarily for tourism purposes, so are always considered tourism expenditure. TSAs have defined a set of consumer durables with very high tourism usage, based on a list developed by the OECD and supplemented with consumer durables considered to have very high tourism usage in New Zealand. (See appendix 3: Tourism product classification for items included as tourism consumer durables.)

Holiday homes

A TSA imputes a year-round rental on all holiday homes. Although a holiday home may not be in full-time use, it is available to be used all year, and therefore the total 'cost' of owning the holiday home is allocated to tourism expenditure.

An imputed rental on owner-occupied dwellings is calculated in the national accounts. This is done to avoid distortions over time resulting from changes in the number of persons renting versus owning homes (otherwise, an increase in the number of persons renting homes would increase GDP). This imputed rental is applied to both first and second homes (which includes holiday homes).

For a TSA, 'demand' for holiday homes is assumed to come solely from domestic recreational tourists, due to a lack of data on the origin of holiday home owners. Total supply of holiday homes is set equal to the total imputed holiday home rental (and therefore total demand) of domestic household tourists, as holiday home supply is provided solely for the purposes of tourism.

Package tours

TsAs apply the net approach to recording package tour expenditure. The net approach to package tours records the organiser's margin as the sole output of the tour organiser for arranging the tour. This maintains the implied direct relationship between the tourist and the tour provider (for example, an airline or hotel). In other words, the tour organiser is paid a fee for organising the tour, and the tourist is regarded as having directly purchased the good or service from the provider. This net approach is the treatment recommended by the WTO.

Travel agency services

There are two major ways in which travel agents obtain their income. Firstly, income may be earned by buying travel products (generally at a bulk discount) and selling them to travellers, earning a margin. Secondly, an agent may book a traveller's fare or accommodation with the service provider, and receive commission from the service provider (on behalf of the traveller). There are special treatments in the TSA for each of these means of generating income:

- Where travel agents have sold travel to travellers, then travellers are recorded as having bought travel (from the travel provider) and travel agency services (the travel agent's margin).
- Where travel agents have received commissions, providers are assumed to have purchased travel agency services on behalf of the tourist. This means that these travel agency services are included in direct tourism demand and therefore contribute to direct tourism value-added. Consequently, business travel expenditure includes a high level of demand for travel agency services.

Non-market output consumed by tourists

The New Zealand TSA does not include an imputation for the provision of individual non-market tourism services in total tourism consumption. These services include information centres, museums and libraries, and any other services tourists use without having to pay for them, such as national parks. This is a recommended inclusion in WTO TSA methodology.

To implement the WTO recommendation requires:

- a very detailed functional breakdown of the expenditure of government and non-profit institutions; that is, separately identifying those entities which provide 'individualised' services.
- splitting this expenditure between tourist and non-tourist consumption.

The identification of 'individualised' and 'collective' non-market consumption is a *System of National Accounts 1993* recommendation. However, this has been only partially implemented (local government has not been fully split). In areas that have been split, the breakdowns are not sufficiently detailed for TSA purposes. Improvements in national accounts data collection are currently planned that may allow individual non-market services to be calculated in future.

Appendix 3

Tourism product classification

For a provisional tourism satellite account, tourism product information is less detailed than for final accounts. Table 14 shows these distinctions. The inclusions and exclusions are not exhaustive, but are intended to clarify coverage from a tourism perspective.

Table 14

Tourism Product Classification

Tourism product – Provisional tourism satellite accounts	Tourism product – Tourism satellite accounts	Includes	Excludes
Accommodation services	Accommodation services	Hotel and other lodging services	Accommodation for the elderly. Students' accommodation (eg student hostels) are excluded from tourism demand
Food and beverage serving services	Food and beverage serving services	Takings from meals (including takeaways), beverage serving services for consumption on the premises	
Air passenger transport	Air passenger transport	Scheduled and unscheduled air passenger transport. Rental services of aircraft with operator	Air freight transport
Other passenger transport	Road passenger transport	Bus and taxi passenger transport, other unscheduled road passenger services	Road freight transport
	Rail passenger transport	Passenger transport by rail	Rail freight transport
	Water passenger transport	Passenger transport by international and coastal sea-going vessels and inland water passenger transport	Water freight transport
	Travel agency services	Booking services, ticket selling	Freight agency services
	Motor vehicle hire or rental	Hiring of cars, trucks, buses and campervans	Taxis, hiring of motor vehicles with drivers, machinery hire
Retail sales – fuel and other automotive products	Retail sales – fuel and other automotive products	Diesel, motor oils	
Retail sales – other	Retail sales – alcohol	Alcoholic beverages purchased from liquor stores, supermarkets and other retail outlets	Alcohol sold for consumption on premises
	Retail sales – clothing and footwear		
	Retail sales – food, beverages, tobacco and other groceries		
	Retail sales – retail medicines, toiletries		
	Retail sales – tourism consumer durables	Tents, sleeping bags, luggage, skiing equipment, climbing/tramping equipment, diving equipment, motor vehicles, pleasure and sporting boats	
	Retail sales – other shopping		

Table 14
 continued

Tourism Product Classification

Tourism product – Provisional tourism satellite accounts	Tourism product – Tourism satellite accounts	Includes	Excludes
Other tourism products	Imputed rental on holiday homes	Imputed rental on second homes used only (or partly) by the owner. These may be made available to third parties for holidays, leisure and business activities	
	Libraries, archives, museums and other cultural services	Zoos, nature reserves	
	Other sport and recreation services	Recreational parks and gardens, services to the arts, horse and dog racing, golf course operation, swimming pools, ski-fields and other recreation services	
	Financial services	Issuing and negotiating foreign cash and non trade financial instruments	Financial intermediation services indirectly measured
	General insurance	Travel insurance, other general insurance	Life insurance, superannuation and health insurance
	Social and health-related services	Health and medical services, social services	
	Gambling services	Gambling at the casino, other gambling services	
	Education services ⁽¹⁾	Spending on education by international students studying in New Zealand for less than 12 months	Spending on education by international students studying in New Zealand for more than 12 months
	Other tourism-related services	Telecommunications, postal and courier services and other tourism products	Health and medical services
Other personal services	Laundry services, film processing, hairdressing and beauty services		

(1) Prior to the *Tourism Satellite Account 2005*, education services was included within other tourism-related services.

Appendix 4

Tourism industry concordance

Within the national accounting system, industries are defined as a group of producers that supply a particular good or service. Instead of producing a common good or service, the tourism 'industry' is defined by the particular group of consumers who purchase its output – tourists. For a provisional tourism satellite account, tourism industry information is more aggregated than for final accounts. This is shown in table 15.

Table 15

Tourism Industry Concordance

Tourism industry category – Provisional tourism satellite accounts	Tourism industry category – Tourism satellite accounts	Tourism industry component	ANZSIC code	ANZSIC industry description
Tourism-characteristic industries	Tourism-characteristic industries	Accommodation ⁽¹⁾	H571	Accommodation
		Cafes and restaurants ⁽¹⁾	H572	Pubs, taverns and bars
			H573	Cafes and restaurants
			H574	Clubs (hospitality)
		Road passenger	I6121	Long distance bus transport
			I6122	Short distance bus transport (including tramway)
			I6123	Taxi and other road passenger transport
		Rail transport	I62	Rail transport
		Water transport	I63	Water transport
		Air transport	I64	Air and space transport
		Other transport, storage and transport services	I65	Other transport
			I66	Services to transport
			I67	Storage
Machinery and equipment hiring and leasing	L774	Machinery and equipment hiring and leasing		
Cultural and recreational services	P92	Libraries, museums and the arts		
	P93	Sport and recreation		
All other industries	Tourism-related industries	Retail trade	G511	Supermarket and grocery stores
			G512	Specialised food retailing
			G521	Department stores
			G522	Clothing and soft good retailing
			G523	Furniture, houseware and appliance retailing
			G524	Recreational good retailing
			G525	Other personal and household good retailing
			G526	Household equipment repair services
			G53	Motor vehicle retailing and services
			All non-tourism-related industries	

(1) Prior to the *Tourism Satellite Account 2005*, the cafes and restaurants industry was combined with the accommodation industry.

Appendix 5

Detailed results for 2004

This section contains the detailed tables for the Tourism Satellite Account for the year ended March 2004.

The more detailed final accounts for the year ended March 2003 are also available on request, or can be obtained as analytical tables from the Statistics New Zealand website (www.stats.govt.nz).

Table 16

Tourism Expenditure
By type of product and type of tourist⁽¹⁾⁽²⁾
 Year ended March 2004

Product	Domestic demand			International demand	Total demand
	Business demand	Government demand	Household demand		
	\$(million)				
Tourism-characteristic products					
Accommodation services	139	60	465	915	1,578
Food and beverage serving services	42	18	769	1,228	2,058
Road, rail and water passenger transport ⁽³⁾	106	30	199	177	512
Air passenger transport	671	133	591	1,850	3,245
Travel agency services	454	87	184	253	979
Motor vehicle hire or rental	53	21	45	270	390
Imputed rental on holiday homes	0	0	335	0	335
Libraries, archives, museums and other cultural services	0	0	38	82	120
Other sport and recreation services	4	-	196	145	345
Total tourism-characteristic products	1,469	349	2,823	4,919	9,560
Tourism-related products					
Retail sales – alcohol	0	0	122	81	204
Retail sales – clothing and footwear	0	0	249	249	498
Retail sales – food, beverages, tobacco and other groceries	0	0	839	255	1,094
Retail sales – fuel and other automotive products	128	2	1,117	216	1,464
Retail sales – retail medicines, toiletries	0	0	71	58	128
Retail sales – tourism consumer durables	0	0	894	44	938
Retail sales – other shopping	0	0	414	556	970
Financial services	4	1	10	8	22
General insurance (incl travel insurance)	8	1	12	7	28
Social and health-related services	0	0	69	-	69
Gambling services	0	0	66	45	111
Education services	0	0	0	425	425
Other tourism-related services	117	1	188	310	615
Other personal services	0	0	20	21	41
Total tourism-related products	257	4	4,070	2,275	6,607
Total tourism demand by type of tourist excluding GST	1,726	353	6,893	7,194	16,167
GST paid on purchases by tourists	11	-	762	519	1,292
Total tourism expenditure by type of tourist	1,737	353	7,655	7,714	17,459

(1) Individual figures may not sum to stated totals due to rounding.

(2) All values are in producers' prices.

(3) Road, rail and water passenger transport are combined for confidentiality reasons.

Table 17

New Zealand System of National Accounts Production Accounts

By industry⁽¹⁾⁽²⁾

Year ended March 2004

	Tourism-characteristic industries							Tourism-related industries	All non-tourism-related industries	Total
	Accommodation	Cafes and restaurants	Road passenger, rail and water transport ⁽³⁾	Air transport	Other transport, storage and transport services	Machinery and equipment hiring and leasing	Cultural and recreational services	Retail trade		
\$(million)										
Published GDP	...	...	...	...	...	...	...	...	...	139,753
Less GST, import duties and other taxes on production	...	...	...	...	...	...	...	...	...	10,297
Contribution to GDP from production	966	1,570	701	946	2,020	1,304	2,417	8,542	110,990	129,455
Equivalent to total output	1,961	3,658	1,824	3,795	3,491	2,082	4,240	15,696	236,133	272,880
Less intermediate consumption	995	2,088	1,123	2,849	1,472	778	1,823	7,154	125,143	143,425
Components of GDP										
Compensation of employees	500	1,007	494	654	918	242	820	4,530	50,320	59,484
Gross operating surplus	427	513	331	273	1,057	1,037	1,243	3,889	53,967	62,737
Taxes on production and imports	41	53	40	19	45	27	369	149	6,932	7,675
Less subsidies	1	3	165	0	0	1	15	26	229	440

(1) Individual figures may not sum to stated totals due to rounding.

(2) All values are in producers' prices.

(3) Road passenger, rail and water transport are combined for confidentiality reasons.

Table 18

Sales Analysis
By type of product and industry⁽¹⁾⁽²⁾
 Year ended March 2004

Product	Tourism-characteristic industries							Tourism-related industries	All non-tourism-related industries	Imports	Total supply
	Accommodation	Cafes and restaurants	Road passenger, rail and water transport ⁽³⁾	Air transport	Other transport, storage and transport services	Machinery and equipment hiring and leasing	Cultural and recreational services	Retail trade			
	\$(million)										
Sales of tourism-characteristic products											
Accommodation services	1,068	158	0	0	0	0	82	0	366	0	1,674
Food and beverage serving services	626	2,903	-	0	2	-	72	945	269	0	4,818
Road, rail and water passenger transport ⁽³⁾	0	0	894	0	2	-	8	0	138	0	1,042
Air passenger transport	0	0	0	3,237	9	0	0	0	60	0	3,306
Travel agency services	0	0	4	3	978	1	3	0	8	0	997
Motor vehicle hire or rental	0	0	3	0	0	473	0	0	7	0	484
Imputed rental on holiday homes	0	0	0	0	0	0	0	0	335	0	335
Libraries, archives, museums and other cultural services	0	0	0	0	0	0	307	4	154	0	465
Other sport and recreation services	0	0	0	-	-	4	725	0	265	0	995
Total tourism-characteristic products	1,694	3,061	902	3,240	992	479	1,195	949	1,601	0	14,114
Sales of tourism-related products											
Retail sales – alcohol	201	347	-	-	0	-	3	142	2,868	313	3,873
Retail sales – clothing and footwear	0	0	-	0	0	0	1	1,324	1,434	1,218	3,977
Retail sales – food, beverages, tobacco and other groceries	17	36	0	1	2	0	1	2,908	25,512	1,781	30,258
Retail sales – fuel and other automotive products	0	0	2	5	1	24	0	332	4,388	1,539	6,290
Retail sales – retail medicines, toiletries	0	0	0	0	0	0	0	917	1,612	1,286	3,815
Retail sales – tourism consumer durables	0	0	78	-	3	0	2	1,953	2,916	5,183	10,135
Retail sales – other shopping	0	0	27	-	2	2	58	2,740	12,507	6,215	21,550
Financial services	0	0	0	0	0	0	-	0	1,860	0	1,860
General insurance (incl travel insurance)	0	0	0	0	0	0	0	0	1,807	0	1,807
Social and health-related services	0	0	0	0	-	0	1	0	4,741	0	4,742
Gambling services	0	155	0	0	0	0	1,845	0	45	0	2,045
Education services	0	0	0	-	-	0	1	0	2,690	0	2,692
Other tourism-related services	0	0	4	-	126	3	37	2,749	21,127	0	24,045
Other personal services	0	0	0	-	0	-	1	0	1,147	0	1,149
Total tourism-related products	218	538	111	7	133	30	1,948	13,066	84,655	17,534	118,240
Sales of all domestically produced non-tourism-related products											
	38	54	804	536	2,337	1,555	1,071	1,608	147,564	...	155,566
Total sales	1,951	3,653	1,817	3,782	3,462	2,064	4,214	15,623	233,820	17,534	287,920
Other output items											
	11	5	7	13	29	18	26	73	2,313	...	2,495
Less imports of tourism-related products ⁽⁴⁾	-17,534	-17,534
Total output	1,961	3,658	1,824	3,795	3,491	2,082	4,240	15,696	236,133	...	272,880

(1) Individual figures may not sum to stated totals due to rounding.

(2) All values are in producers' prices.

(3) Road, rail and water passenger transport are combined for confidentiality reasons.

(4) Imports of tourism-related products are subtracted from total sales, as this relates to goods not produced in New Zealand.

Table 19

Derivation of Tourism Product Ratios⁽¹⁾⁽²⁾
Year ended March 2004

Product	Total demand (from table 16)	Total supply (from table 18)	Tourism product ratio ⁽³⁾
	\$(million)		
Tourism-characteristic products			
Accommodation services	1,578	1,674	0.94
Food and beverage serving services	2,058	4,818	0.43
Road, rail and water passenger transport ⁽⁴⁾	512	1,042	0.49
Air passenger transport	3,245	3,306	0.98
Travel agency services	979	997	0.98
Motor vehicle hire or rental	390	484	0.81
Imputed rental on holiday homes	335	335	1.00
Libraries, archives, museums and other cultural services	120	465	0.26
Other sport and recreation services	345	995	0.35
Total tourism-characteristic products	9,560	14,114	...
Tourism-related products			
Retail sales – alcohol	204	3,873	0.05
Retail sales – clothing and footwear	498	3,977	0.13
Retail sales – food, beverages, tobacco and other groceries	1,094	30,258	0.04
Retail sales – fuel and other automotive products	1,464	6,290	0.23
Retail sales – retail medicines, toiletries	128	3,815	0.03
Retail sales – tourism consumer durables	938	10,135	0.09
Retail sales – other shopping	970	21,550	0.05
Financial services	22	1,860	0.01
General insurance (incl travel insurance)	28	1,807	0.02
Social and health-related services	69	4,742	0.01
Gambling services	111	2,045	0.05
Education services	425	2,692	0.16
Other tourism-related services	615	24,045	0.03
Other personal services	41	1,149	0.04
Total tourism-related products	6,607	118,240	...
Total excluding GST	16,167	132,354	...
GST paid on purchases by tourists	1,292	...	...
Total tourism expenditure by type of tourist	17,459	...	...

(1) Individual figures may not sum to stated totals due to rounding.

(2) All values are in producers' prices.

(3) Tourism product ratios shown in this table may differ at the industry level for some products from the ratios used to derive tourism supply in table 20. Supply is calculated at a more detailed level than the level presented in other tables.

(4) Road, rail and water passenger transport are combined for confidentiality reasons.

Table 20

Derivation of Tourism Industry Ratios⁽¹⁾⁽²⁾
Year ended March 2004

Product	Tourism-characteristic industries							Tourism-related industries	All non-tourism-related industries	Imports	Total
	Accommodation	Cafes and restaurants	Road passenger, rail and water transport ⁽³⁾	Air transport	Other transport, storage and transport services	Machinery and equipment hiring and leasing	Cultural and recreational services	Retail trade			
	\$(million)										
Tourism-characteristic products											
Accommodation services	1,007	149	0	0	0	0	77	0	345	0	1,578
Food and beverage serving services	277	1,268	-	0	1	-	32	365	115	0	2,058
Road, rail and water passenger transport ⁽³⁾	0	0	450	0	1	-	4	0	56	0	512
Air passenger transport	0	0	0	3,194	9	0	0	0	42	0	3,245
Travel agency services	0	0	4	3	960	1	3	0	8	0	979
Motor vehicle hire or rental	0	0	3	0	0	381	0	0	6	0	390
Imputed rental on holiday homes	0	0	0	0	0	0	0	0	335	0	335
Libraries, archives, museums and other cultural services	0	0	0	0	0	0	79	1	40	0	120
Other sport and recreation services	0	0	0	-	-	2	254	0	89	0	345
Total tourism-characteristic products purchased by tourists	1,284	1,416	457	3,196	971	384	449	366	1,036	0	9,560
Tourism-related products											
Retail sales – alcohol	15	26	0	-	0	-	-	12	129	21	204
Retail sales – clothing and footwear	0	0	-	0	0	0	-	166	180	151	498
Retail sales – food, beverages, tobacco and other groceries	3	7	0	-	-	0	-	232	764	87	1,094
Retail sales – fuel and other automotive products	0	0	-	1	-	5	0	148	1,009	300	1,464
Retail sales – retail medicines, toiletries	0	0	0	0	0	0	0	37	55	37	128
Retail sales – tourism consumer durables	0	0	2	-	-	0	-	199	471	265	938
Retail sales – other shopping	0	0	-	-	-	-	10	287	508	163	970
Financial services	0	0	0	0	0	0	-	0	22	0	22
General insurance (incl travel insurance)	0	0	0	0	0	0	0	0	28	0	28
Social and health-related services	0	0	0	0	-	0	-	0	69	0	69
Gambling services	0	1	0	0	0	0	109	0	-	0	111
Education services	0	0	0	0	0	0	0	0	425	0	425
Other tourism-related services	0	0	-	-	7	-	3	174	431	0	615
Other personal services	0	0	0	0	0	-	-	0	41	0	41
Total tourism-related products purchased by tourists	18	34	3	1	8	6	122	1,255	4,133	1,025	6,607
Direct tourism sales	1,302	1,450	460	3,197	979	389	571	1,621	5,169	1,025	16,167
Total industry output	1,961	3,658	1,824	3,795	3,491	2,082	4,240	15,696	236,133	...	272,880
Tourism industry ratio	0.66	0.40	0.25	0.84	0.28	0.19	0.13	0.10	0.02	...	...

(1) Individual figures may not sum to stated totals due to rounding.

(2) All values are in producers' prices.

(3) Road, rail and water passenger transport are combined for confidentiality reasons.

Table 21

Derivation of Tourism Direct Value-added⁽¹⁾⁽²⁾
 Year ended March 2004

	Tourism-characteristic industries							Tourism-related industries	All non-tourism-related industries	Total
	Accommodation	Cafes and restaurants	Road passenger, rail and water transport ⁽³⁾	Air transport	Other transport, storage and transport services	Machinery and equipment hiring and leasing	Cultural and recreational services	Retail trade		
	\$(million)									
Tourism industry ratio	0.66	0.40	0.25	0.84	0.28	0.19	0.13	0.10	0.02	...
Direct tourism value-added	642	623	195	717	646	243	326	862	2,444	6,700
<i>Equivalent to</i> tourism output	1,302	1,450	460	3,197	979	389	571	1,621	5,169	15,139
<i>Less</i> tourism intermediate consumption	660	828	265	2,480	333	146	245	759	2,725	8,439
Contribution to GDP from production	...	...	...	...	...	...	...	...	...	129,455
Direct tourism value-added as a percentage of total industry contribution to GDP	...	...	...	...	...	...	...	...	...	5.2%
Components of direct tourism value-added										
Tourism compensation of employees	332	399	135	495	303	46	110	460	1,123	3,403
Tourism gross operating surplus	284	203	50	207	329	195	166	390	989	2,814
Tourism taxes on production and imports	27	21	15	15	15	3	50	15	333	493
<i>Less</i> tourism subsidies	1	1	4	0	0	-	2	3	1	12

(1) Individual figures may not sum to stated totals due to rounding.

(2) All values are in producers' prices.

(3) Road, rail and water passenger transport are combined for confidentiality reasons.

Table 22

Direct Tourism Employment and Compensation of Employees
By industry⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾
 Year ended March 2004

	Tourism-characteristic industries							Tourism-related industries	All non-tourism-related industries	Total persons engaged
	Accommodation	Cafes and restaurants	Road, rail and water passenger transport ⁽⁵⁾	Air transport	Other transport, storage and transport services	Machinery and equipment hiring and leasing	Cultural and recreational services	Retail trade		
Number										
Total employment										
Full-time employees	10,100	20,200	8,000	7,700	15,500	5,000	17,700	101,400	1,038,700	1,224,200
Part-time employees	14,800	40,000	5,900	1,400	3,800	1,000	14,000	89,000	192,700	362,500
FTE ⁽⁶⁾ employees	17,500	40,200	11,000	8,300	17,400	5,500	24,700	145,900	1,135,000	1,405,400
Full-time working proprietors	4,100	6,400	4,700	100	2,400	700	4,700	34,500	240,400	297,900
Part-time working proprietors	900	900	400	0	300	100	2,800	5,700	56,800	67,900
FTE working proprietors	4,600	6,900	4,900	100	2,500	700	6,100	37,300	268,800	331,900
Total FTE persons engaged	22,100	47,000	15,800	8,400	19,900	6,200	30,800	183,300	1,403,800	1,737,300
Tourism industry ratio⁽⁷⁾	0.66	0.40	0.25	0.84	0.28	0.19	0.13	0.10	0.02	...
Tourism employment										
Tourism full-time employees	6,700	8,000	2,300	6,500	4,400	900	2,300	10,300	19,500	60,900
Tourism part-time employees	9,800	15,800	2,200	1,100	1,100	200	1,900	10,100	8,100	50,400
Tourism FTE employees	11,600	15,900	3,500	7,000	4,900	1,000	3,300	15,300	23,500	86,100
Tourism full-time working proprietors	2,700	2,600	1,800	100	700	100	600	4,000	3,000	15,600
Tourism part-time working proprietors	600	300	100	0	100	-	400	600	1,200	3,400
Tourism FTE working proprietors	3,100	2,700	1,900	100	700	100	800	4,300	3,600	17,300
Total FTE persons engaged in tourism	14,700	18,600	5,300	7,100	5,600	1,200	4,100	19,600	27,100	103,300
FTE persons engaged in tourism as a percentage of total persons engaged in New Zealand	...	...	...	...	...	...	...	...	...	5.9%
\$(million)										
Tourism compensation of employees⁽⁷⁾	332	399	135	495	303	46	110	460	1,123	3,403
(\$)										
Average compensation per tourism FTE employee ⁽⁸⁾	28,600	25,100	38,800	70,500	62,000	43,800	33,500	30,000	47,700	39,500

(1) As a result of a change in methodology, this data is only available from 2001. For more details refer to appendix 2.

(2) Employment numbers are rounded to the nearest hundred. Individual figures may not sum to stated totals due to rounding.

(3) Employee numbers by industry are sourced from the Quarterly Employment Survey (QES) and are averages for the year ended February.

Employee numbers for the water transport and agriculture industries are not available from the QES, as parts of each industry are not surveyed. As a result, employee numbers for these industries are sourced from the Household Labour Force Survey (HLFS).

Total persons engaged are sourced from the HLFS and are averages for the year ended March.

(4) Working proprietor numbers by industry are sourced from the HLFS and are averages for the year ended March.

(5) Road, rail and water passenger transport are combined for confidentiality reasons.

(6) FTE is an abbreviation for full-time equivalent.

(7) The tourism industry ratio and compensation of employees rows are sourced from table 21.

(8) Calculated as tourism compensation of employees divided by tourism FTE employees and then rounded to the nearest hundred.

Table 23

Gross Fixed Capital Formation and Net Capital Stock*By industry*⁽¹⁾⁽²⁾⁽³⁾

Year ended March 2004

	Tourism-characteristic industries							Total tourism-characteristic industries	All other industries ⁽⁵⁾	Total
	Accommodation	Cafes and restaurants	Road, rail and water passenger transport ⁽⁴⁾	Air transport	Other transport, storage and transport services	Machinery and equipment hiring and leasing	Cultural and recreational services			
\$(million)										
Gross fixed capital formation										
Asset type										
Residential building	0	0	0	0	0	0	0	0	9,179	9,179
Non-residential building	208	60	14	11	180	36	273	784	2,829	3,612
Other construction	1	7	1	-	60	4	2	75	3,491	3,566
Land improvement ⁽⁶⁾	1	1	-	-	1	-	2	5	462	467
Transport equipment	22	12	168	166	35	1,051	28	1,481	2,679	4,161
Plant, machinery and equipment	118	126	51	38	180	243	235	992	7,284	8,277
Intangible assets	4	4	9	7	37	7	10	78	2,243	2,321
Total gross fixed capital formation	355	209	243	222	493	1,341	550	3,416	28,166	31,582
Net capital stock										
Total net capital stock	2,372	2,026	2,855	1,409	4,404	4,928	4,584	22,578	370,958	393,536

(1) Individual figures may not sum to stated totals due to rounding.

(2) All values are in purchasers' prices.

(3) Gross fixed capital formation by industry and asset type and net capital stock by industry were used as a basis for calculating the table.

(4) Road, rail and water passenger transport are combined for confidentiality reasons.

(5) The all other industries column includes all tourism-related and non-tourism-related industries.

(6) Land improvements are shown in gross fixed capital formation, but do not form a part of net capital stock.

Glossary

National accounts definitions

Basic prices

The amounts receivable by producers from purchasers for units of goods or services produced as outputs minus any taxes payable, and plus any subsidies receivable. They exclude any transport charges invoiced separately by the producers.

Change in inventories

The book value change as recorded in most business accounting records, less an inventory valuation adjustment which removes the capital gains and losses that may arise through holding inventories purchased at prices either higher or lower than those ruling during the period of account. Change in inventories effectively values the change in stocks at the average prices for the period.

Compensation of employees

Total remuneration, in cash or in kind, payable by enterprises to employees. Includes contributions paid on employees' behalf to superannuation funds, private pension schemes, the Accident Compensation Corporation, casualty and life insurance schemes, and other fringe benefits.

Consumption of fixed capital

The reduction in the value of the fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence or accidental damage. It is valued at replacement cost.

Exports of goods and services

All goods and services produced by New Zealand residents and purchased by non-residents.

Gross domestic product (GDP)

The total market value of goods and services produced in New Zealand after deducting the cost of goods and services utilised in the process of production, but before deducting allowances for the consumption of fixed capital.

Gross fixed capital formation

The total value of a producer's purchases, less disposals, of durable real assets such as buildings, motor vehicles, plant and machinery, hydro-electric construction, roading and improvements to land. Land is excluded from gross fixed capital formation. Included is the value of construction work done by a firm's own employees. The term 'gross' indicates that consumption of fixed capital has not been deducted from the value of the outlays.

Gross operating surplus

Output at producer's values less the sum of intermediate consumption, compensation of employees, and taxes on production and imports net of subsidies. It is approximately equal to accounting profit before the deduction of depreciation, direct taxes, dividends, interest paid and bad debts, and before the addition of interest and dividends received.

GST on production

The transactions of registered producers are recorded excluding goods and services tax (GST), while those of final consumers (including producers of exempt goods and services) are recorded at actual market prices. The potential imbalance between the value of goods and services produced and the value ultimately consumed is removed by including the item 'GST on production' in the GDP account. This item produces a measure of the amount of GST included in the valuation of the final demand categories.

Imports of goods and services

All goods and services produced by non-residents and purchased by New Zealand residents.

Intermediate consumption

The value of non-durable goods and services used in production. Valuation is at purchasers' prices.

Net capital stock

The accumulated written-down value of fixed assets valued in current prices. It is equal to accumulated investment less retirements and less accumulated depreciation for assets still operating.

Output

Goods and services produced within an establishment that become available for use outside that establishment, plus any goods and services produced for own final use.

Producers' prices

The amount receivable by producers from purchasers for goods or services produced as outputs less any deductible taxes invoiced to purchasers. The producers' prices exclude any transport charges invoiced separately by producers.

Purchasers' prices (market prices)

The amounts paid by purchasers, exclusive of any deductible taxes, in order to take delivery of goods or services at the times and places required by purchasers. The purchasers' prices of goods are inclusive of any transport charges paid separately by purchasers to take deliveries at the required times and places.

Subsidies

Current unrequited payments made by governments to enterprises on the basis of the levels of their production activities or the quantities or values of the goods and services they produce, sell or import.

Taxes on production and imports

Taxes assessed on producers in respect of the production, sale, purchase and use of goods and services, and that add to the market prices of those goods and services. Includes sales tax, local authority rates, import and excise duties, fringe benefits tax, and also registration fees, such as motor vehicle registration, paid by producers.

Value-added

The value added to goods and services by the contributions of capital and labour (that is after the costs of bought-in materials and services have been deducted from the total value of output).

Abbreviations used in this report

AFUS: Annual Frame Update Survey

ANZSCC: *Australian and New Zealand Standard Commodity Classification*

ANZSIC: *Australian and New Zealand Standard Industry Classification*

BoP: Balance of Payments

CPI: Consumers Price Index

DTS: Domestic Travel Survey

GDP: Gross Domestic Product

HCE: Household Consumption Expenditure

HES: Household Economic Survey

HLFS: Household Labour Force Survey

IO96: Input-output tables for 1996

ISIC: *International Standard Industrial Classification*

IVS: International Visitors Survey

NZSIC: *New Zealand Standard Industry Classification*

NZSNA: *New Zealand System of National Accounts*

QES: Quarterly Employment Survey

OECD: Organisation for Economic Co-operation and Development

TSA: Tourism Satellite Account

WTO: World Tourism Organization

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