

Tourism Satellite Account

2000–2003

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Preface

The *Tourism Satellite Account 2000–2003* 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, with the endorsement of the Tourism Research Council New Zealand (TRCNZ). It is one component of a 'core set' of tourism data designed to provide 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 2000–2003* has been compiled in line with guidelines published by the World Tourism Organisation (WTO) and approved by the United Nations Statistical Commission in 2000.



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Percentage changes

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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 the symbols used throughout this report is as follows:

- C confidential
- E early estimate
- P provisional
- R revised
- S suppressed
- nil or zero
- figure(s) not available
- .. figure too small to be expressed
- ... 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 overseas visitors and by domestic household, business and government travellers. International tourism expenditure includes spending by international students studying in New Zealand for less than one year.

Key results for the year ended March 2003 are:

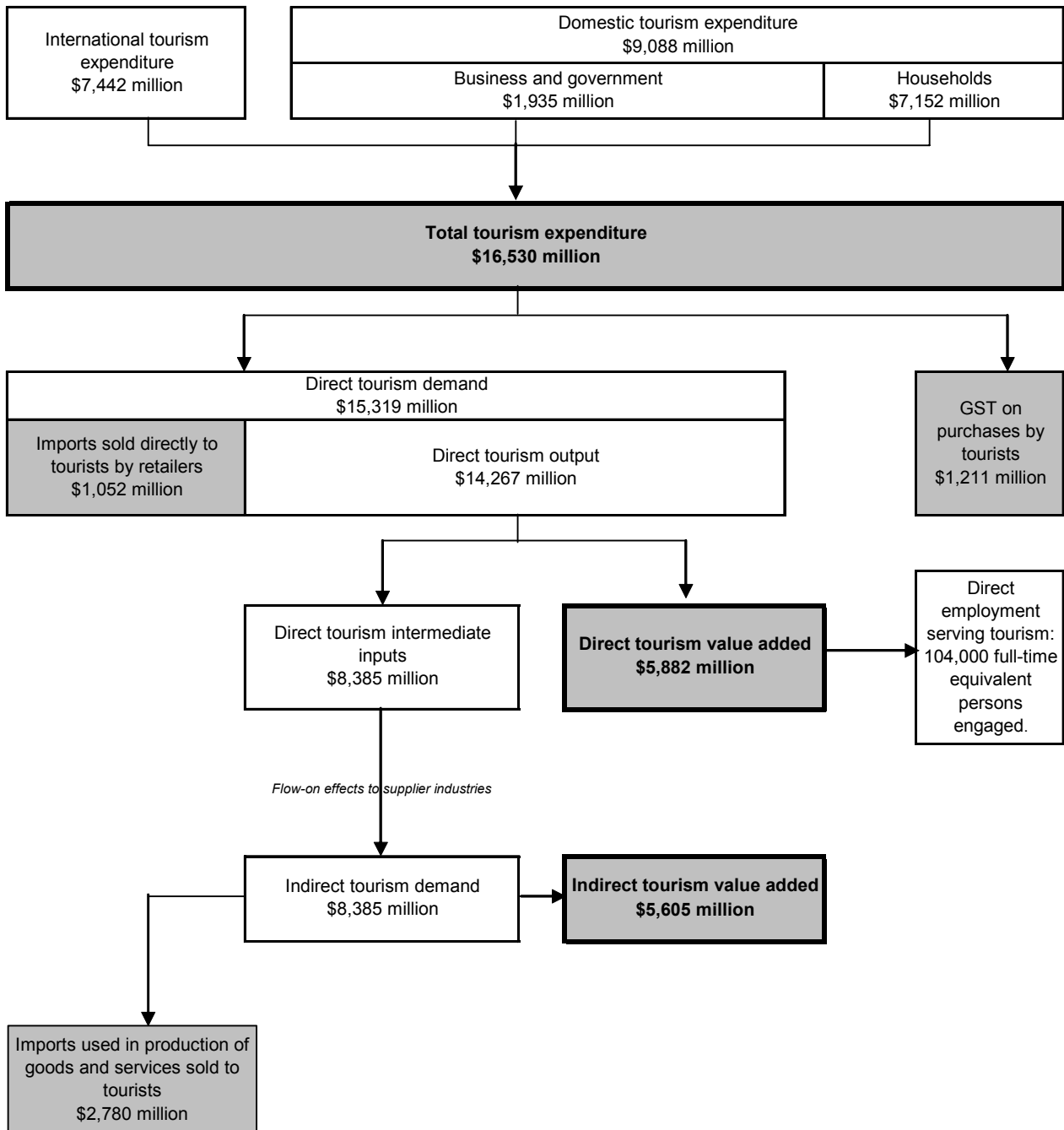
- Total tourism expenditure was \$16.5 billion for the year ended March 2003.
- International tourism contributed \$7.4 billion (or 17.8 percent) to total New Zealand exports in 2003.
- Domestic tourism expenditure was \$9.1 billion for the year ended March 2003.
- In 2003, tourism generated a direct contribution to gross domestic product (GDP) of \$5.9 billion, or 4.9 percent of New Zealand's total industry contribution to GDP.
- A further \$5.6 billion value added was generated by industries supporting tourism.
- An estimated 104,000 full-time equivalent employees (or 6.2 percent of total employment in New Zealand) were directly engaged in producing goods and services purchased by tourists in 2003.
- Tourists paid \$1.2 billion in GST on their purchases in the March 2003 year.
- Tourists bought 95 percent of all accommodation supplied in 2003.

Statistics New Zealand's Accommodation Survey recorded 29.0 million guest nights spent in commercial accommodation in New Zealand in the year to March 2003, up 3.9 percent on the 27.9 million guest nights in the year to March 2002. This followed increases of 6.6 percent and 7.3 percent in the years to March 2002 and 2001 respectively.

Figure 1 traces the flows of tourism expenditure through the New Zealand economy for the March 2003 year.

Figure 1

Flows of Tourism Expenditure through the New Zealand Economy
Year ended March 2003



Note: In the diagram above, tourism expenditure is measured in purchaser prices. Other monetary aggregates are measured in producer prices.

Tourism, unlike 'conventional' industries such as agriculture or manufacturing which are classified in accordance with the goods and services they produce, is defined by the characteristics of the customer demanding tourism products. As such, tourism products can cut across standard industry definitions, and 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 a 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. Input-output tables, which give a detailed picture of the economy broken down by industry, product, primary input and final demand category, provide the starting point for deriving final accounts. In order to give a more timely picture of the impact of tourism, provisional tourism satellite accounts are prepared using fewer data sources than final accounts, are presented in a less detailed format, and are subject to revision as relevant data sources subsequently become available.

As balanced input-output tables are completed for the relevant years, the TSA programme will replace provisional estimates with final accounts.

Tourism Satellite Account 2000–2003 (TSA00–03) presents results for 2000 to 2003 at the aggregated provisional estimate level. From TSA99 onwards, all TSAs have been updated for the revised treatment of international students.

The more detailed accounts for the years ended March 1999, March 2000 and March 2001 (TSA99, TSA00 and TSA01, respectively) are available on request, or can be obtained from the Statistics New Zealand website.

Summary results

Value added is the 'value' businesses add to the raw material goods and services they purchase (intermediate inputs) and use up in the process of producing their own output. The measurement of tourism's direct value added, also known as tourism's direct contribution to GDP, is the major focus of a TSA. It measures the contribution to GDP made by the sellers of products to tourists, as well as by the suppliers of retail products which firms on-sell to tourists. This enables a comparison to be made between the tourism industry's contribution to GDP and similar contributions made by 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 direct contact with tourists. Additional value added also 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.

Table 1 presents key results for the years 1999 to 2003.

Table 1

Summary Results					
Item	Year ended March				
	1999	2000	2001	2002	2003
\$(million)					
Direct tourism value added	4,508 R	4,916 R	5,074 R	5,307 R	5,882
Indirect tourism value added ⁽¹⁾	4,130 R	4,616 R	5,417 R	5,574 R	5,605
Imports sold directly to tourists by retailers	668 R	814 R	923 R	949 R	1,052
Imports used in production of goods and services sold to tourists	2,141 R	2,350 R	2,605 R	2,684 R	2,780
GST on purchases by tourists	888 R	978 R	1,072 R	1,112 R	1,211
Total tourism expenditure	12,335 R	13,673 R	15,091 R	15,626 R	16,530
<i>Which consists of:</i>					
International tourism expenditure	4,950 R	5,923 R	6,769 R	7,148 R	7,442
Domestic tourism expenditure	7,385 R	7,750 R	8,322 R	8,479 R	9,088
Employment (FTE persons)					
Directly engaged in tourism	88,000 R	96,000 R	99,000 R	100,000 R	104,000
Indirectly engaged in tourism	58,000 R	63,000	65,000	..	..
Total tourism employment in New Zealand	146,000 R	160,000	164,000	..	..
Value added as a percentage of total industry contribution to GDP					
Direct tourism value added	4.7% R	4.9% R	4.8% R	4.6% R	4.9%
Indirect tourism value added	4.3% R	4.6% R	5.1% R	4.8% R	4.7%
Total tourism value added	9.1% R	9.5% R	9.8% R	9.5% R	9.6%
Employment (FTE persons) engaged in tourism as a percentage of total employment in New Zealand					
Directly engaged in tourism	5.8% R	6.2% R	6.2% R	6.1% R	6.2%
Indirectly engaged in tourism	3.8% R	4.1%	4.1%	..	..
Total tourism employment in New Zealand	9.6% R	10.3%	10.3%	..	..
International tourism as a percentage of total exports	16.2% R	17.6% R	16.4% R	16.4% R	17.8%

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

Tourism expenditure in New Zealand was \$16.5 billion for the year ended March 2003, up 5.8 percent on tourism spending of \$15.6 billion in the March 2002 year. This followed a rise of 3.5 percent, or \$535 million, in the year ended March 2002.

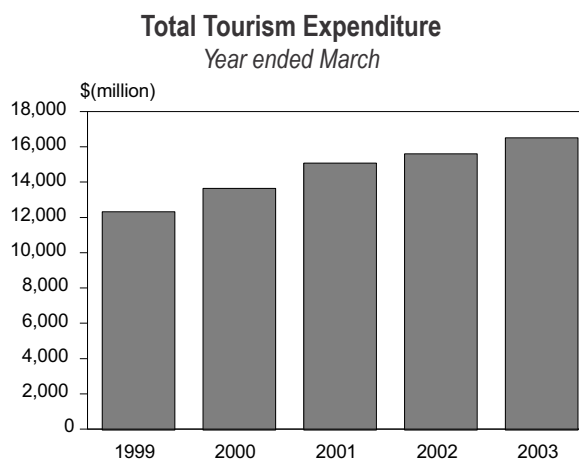
Direct tourism value added was \$5.9 billion, or 4.9 percent of the total industry contribution to GDP, in 2003. When indirect flow-on effects are included, a further \$5.6 billion value added was generated by industries supporting tourism.

An estimated 104,000 full-time equivalent employees were directly engaged in producing goods and services purchased by tourists in the year ended March 2003. This includes employment generated by international students studying in New Zealand for less than one year.

There have been a number of significant tourism-related events in New Zealand over the period covered by TSA00–03. New Zealand's defence of the America's Cup was held in Auckland in the March 2000 and 2003 years. A number of movies filmed in New Zealand have been successful internationally.

Figure 2 shows total tourism expenditure for the years 1999 to 2003.

Figure 2



Tourism expenditure has increased every year through to 2003, with the strongest growth in the March 2000 year (up 10.9 percent). It is likely the terrorist attacks in the United States in September 2001 contributed to slower tourism growth (of 3.5 percent) in 2002.

As figure 3 shows, direct and indirect tourism value added combined accounts for 69.5 percent of total tourism expenditure. GST accounts for just over seven cents in every dollar spent by tourists.

Figure 3

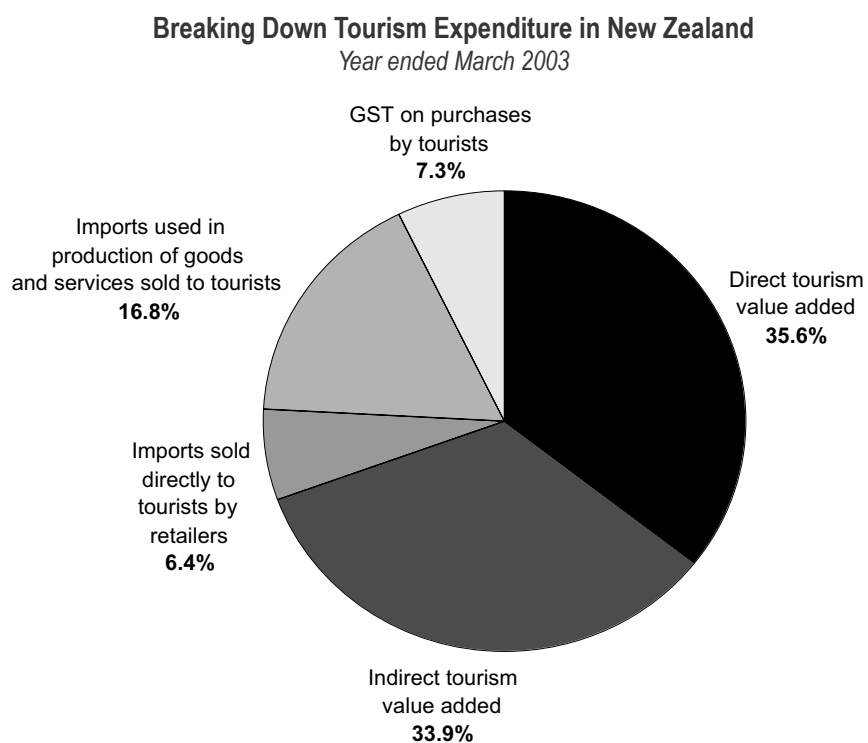
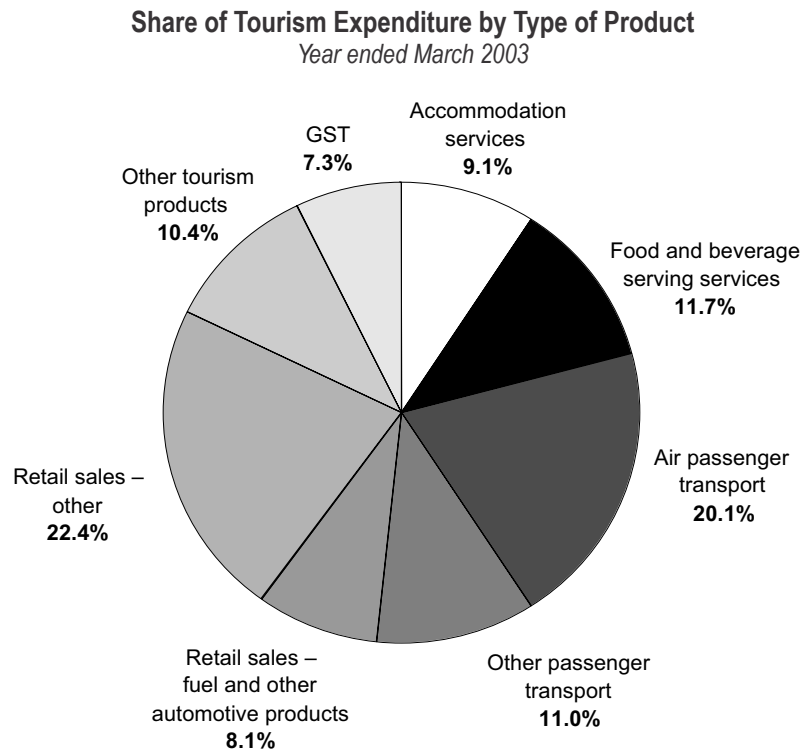


Figure 4 breaks down tourism expenditure by type of product for the year ended March 2003.

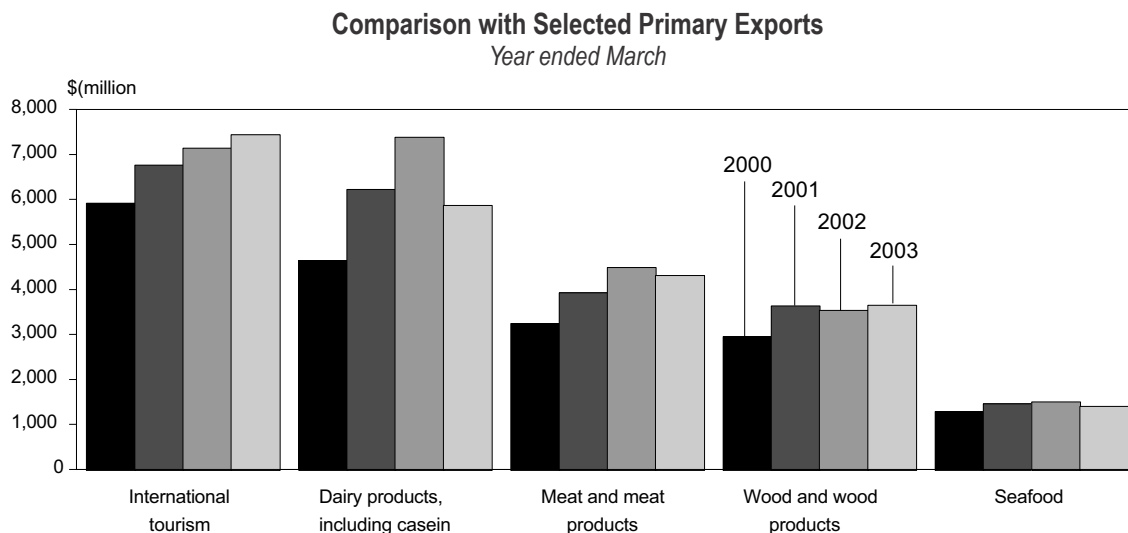
Figure 4



The main products purchased by tourists are retail sales (excluding sales on fuel and other automotive products) and air travel. Tourists spend approximately 9 percent of their budget on accommodation and 12 percent on eating out.

International tourism is a major export earner for New Zealand and compares favourably with other traditional export products, as figure 5 shows.

Figure 5



In 2003, international tourism's contribution to total exports, at \$7.4 billion (or 17.8 percent), was more than export receipts from dairy products, at \$5.9 billion (or 14.0 percent).

2. Results

The results of *Tourism Satellite Account 2000–2003* (TSA00–03) are presented in two sections:

- The first section, Tourism 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 international students studying in New Zealand for less than one year.
- The second section, Direct tourism employment, covers tourism employment. This 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. This includes employment generated by international students studying in New Zealand for less than one year.

Tourism value added

Tourism expenditure

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

Table 2 presents tourism expenditure (or direct tourism demand) by product for the years 1999 to 2003.

Table 2

Tourism Expenditure by Type of Product⁽¹⁾

Product	Year ended March					Annual percentage change			
	1999	2000	2001	2002	2003	2000	2001	2002	2003
	\$(million)					Percent			
Accommodation services	1,073 R	1,214 R	1,311 R	1,426 R	1,502	13.1	8.0	8.7	5.4
Food and beverage serving services	1,383 R	1,539 R	1,679 R	1,772 R	1,928	11.3	9.1	5.5	8.8
Air passenger transport	2,695 R	3,040 R	3,437 R	3,285 R	3,315	12.8	13.1	-4.4	0.9
Other passenger transport	1,346 R	1,469 R	1,605 R	1,726 R	1,814	9.2	9.3	7.5	5.1
Retail sales – fuel and other automotive products	1,056 R	1,157 R	1,313 R	1,314 R	1,340	9.6	13.5	0.1	2.0
Retail sales – other	2,638 R	2,887 R	3,174 R	3,387 R	3,697	9.4	9.9	6.7	9.1
Other tourism products	1,256 R	1,388 R	1,498 R	1,605 R	1,722	10.5	7.9	7.1	7.3
Total tourism demand excluding GST	11,447 R	12,695 R	14,019 R	14,515 R	15,319	8.8	10.4	3.5	5.5
GST paid on purchases by tourists	888 R	978 R	1,072 R	1,112 R	1,211	9.2	9.6	3.7	9.0
Total tourism expenditure	12,335 R	13,673 R	15,091 R	15,626 R	16,530	8.8	10.4	3.5	5.8

(1) All values are in producer prices.

Points to note from table 2:

- Growth in total tourism expenditure was 5.8 percent in 2003, following a lift of 3.5 percent in the previous year.
- Tourism expenditure in the year ended March 2003 was \$16,530 million, which is 34.0 percent higher than expenditure in 1999.
- Between 1999 and 2003, the areas of greatest growth were tourism spending on retail goods excluding fuel and other automotive products (up 40.1 percent), accommodation services (up 39.9 percent), and food and beverage serving services (up 39.4 percent). In the same period, tourism expenditure on fuel and other automotive products, and air passenger transport services supplied by New Zealand resident providers grew by 26.9 and 23.0 percent, respectively.

Table 3 shows the breakdown of international visitors by region of last permanent residence for the years 1999 to 2003. Breakdown by purpose of visit is also included.

Table 3

Overseas Visitor Arrivals⁽¹⁾

Item						Annual percentage change ⁽²⁾			
	1999	2000	2001	2002	2003	2000	2001	2002	2003
By region of last permanent residence									
Oceania	582,191	618,074	687,171	736,638	735,588	6.2	11.2	7.2	-0.1
Asia	340,220	394,379	448,420	478,830	545,538	15.9	13.7	6.8	13.9
Europe	295,043	329,969	378,130	393,463	426,808	11.8	14.6	4.1	8.5
Americas	211,093	234,589	247,338	250,857	260,821	11.1	5.4	1.4	4.0
Other ⁽³⁾	88,777	71,977	87,395	95,750	92,377	-18.9	21.4	9.6	-3.5
Total ⁽⁴⁾	1,517,559	1,651,889	1,848,340	1,954,831	2,062,423	8.9	11.9	5.8	5.5
By purpose of visit									
Holiday/vacation	766,897	841,033	973,760	1,009,814	1,086,051	9.7	15.8	3.7	7.5
Visit friends/relatives	392,296	431,312	482,268	515,211	521,956	9.9	11.8	6.8	1.3
Conference/convention	30,407	36,101	35,589	39,843	39,940	18.7	-1.4	12.0	0.2
Business	179,661	196,784	203,290	206,465	216,884	9.5	3.3	1.6	5.0
Stopover (in transit) ⁽⁵⁾	40,422	11,782	-	-	-	-70.9	...	...	...
Education/Medical ⁽⁵⁾	..	16,055	34,153	47,004	54,835	...	112.7	37.6	16.7
Other ⁽⁶⁾	107,641	115,921	119,394	137,201	141,466	7.7	3.0	14.9	3.1

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

(2) Minus sign denotes a decrease.

(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) In August 1999 a new arrival card was introduced, and the Stopover category of purpose of visit was replaced with a new Education/Medical category.

(6) Includes unspecified.

The number of short-term visitors to New Zealand has risen since 1999, with the strongest growth recorded for the March 2001 year (up 11.9 percent). There was slower growth in tourism numbers for the 2002 and 2003 March years (up 5.8 and 5.5 percent, respectively).

The number of short-term visitors coming to New Zealand for educational or medical purposes rose 16.7 percent in the year ended March 2003.

In the context of a TSA, the term 'tourist' covers a wider range of traveller than might usually be associated with the term. Tourism expenditure includes spending by overseas tourists visiting New Zealand, along with the domestic travel spending of households and employees of private business and government organisations. 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.

Tourism expenditure by product by type of tourist is shown in table 4. The tables firstly show direct tourism demand by type of tourist – business and government, household and international. Total tourism demand is shown in the next column, followed by the total supply of each tourism product and then the resulting tourism product ratio. This ratio represents the proportion of total supply of each product that is purchased by tourists.

Table 4

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

Product	Domestic demand		International demand	Total demand	Total supply	Tourism product ratio
	Business and government demand	Household demand				
\$(million)						
1999						
Accommodation services	140 R	365 R	568 R	1,073 R	1,135 R	0.95 R
Food and beverage serving services	51 R	609 R	723 R	1,383 R	3,765 R	0.37 R
Air passenger transport	682 R	467 R	1,546 R	2,695 R	2,816 R	0.96 R
Other passenger transport	555 R	336 R	455 R	1,346 R	1,757 R	0.77 R
Retail sales – fuel and other automotive products	84 R	858 R	114 R	1,056 R	4,423 R	0.24 R
Retail sales – other	-	1,870 R	768 R	2,638 R	55,134 R	0.05 R
Other tourism products	95 R	687 R	474 R	1,256 R	28,135 R	0.04 R
Total tourism demand by type of tourist excluding GST	1,608 R	5,192 R	4,647 R	11,447 R	...	...
GST paid on purchases by tourists	8 R	577 R	302 R	888 R	...	...
Total tourism expenditure by type of tourist	1,616 R	5,769 R	4,950 R	12,335 R	...	...
2000						
Accommodation services	144 R	397 R	673 R	1,214 R	1,289 R	0.94 R
Food and beverage serving services	53 R	630 R	856 R	1,539 R	3,951 R	0.39 R
Air passenger transport	710 R	470 R	1,860 R	3,040 R	3,122 R	0.97 R
Other passenger transport	577 R	349 R	543 R	1,469 R	1,896 R	0.77 R
Retail sales – fuel and other automotive products	91 R	931 R	135 R	1,157 R	4,883 R	0.24 R
Retail sales – other	- R	1,975 R	912 R	2,887 R	58,706 R	0.05 R
Other tourism products	104 R	700 R	584 R	1,388 R	29,999 R	0.05 R
Total tourism demand by type of tourist excluding GST	1,680 R	5,453 R	5,562 R	12,695 R	...	...
GST paid on purchases by tourists	8 R	609 R	361 R	978 R	...	...
Total tourism expenditure by type of tourist	1,689 R	6,062 R	5,923 R	13,673 R	...	...

(1) All values are in producer prices.

Points to note from table 4:

- International tourism expenditure grew strongly for the 2001 March year (up 14.3 percent). This was followed by more moderate increases of 5.6 and 4.1 percent for the March 2002 and 2003 years, respectively.
- Tourism expenditure by New Zealand domestic households grew strongly in the March 2003 year, rising 8.3 percent. Between 1999 and 2003, tourism spending by New Zealand households rose 24.0 percent. Total household consumption expenditure (HCE) increased 21.8 percent in the same period.
- In 2003, domestic household demand for accommodation services increased 4.6 percent. With petrol prices rising 3.2 percent, households also spent more on fuel and other automotive products (up 1.6 percent for the 2003 March year).

Table 4
continued

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

Product	Domestic demand		International demand	Total demand	Total supply	Tourism product ratio
	Business and government demand	Household demand				
\$(million)						
2001						
Accommodation services	143 R	412 R	756 R	1,311 R	1,382 R	0.95 R
Food and beverage serving services	55 R	663 R	961 R	1,679 R	4,088 R	0.41 R
Air passenger transport	734 R	494 R	2,210 R	3,437 R	3,546 R	0.97 R
Other passenger transport	618 R	375 R	612 R	1,605 R	2,063 R	0.78 R
Retail sales – fuel and other automotive products	100 R	1,063 R	151 R	1,313 R	6,323 R	0.21 R
Retail sales – other	- R	2,150 R	1,024 R	3,174 R	65,138 R	0.05 R
Other tourism products	117 R	730 R	651 R	1,498 R	32,295 R	0.05 R
Total tourism demand by type of tourist excluding GST	1,767 R	5,887 R	6,365 R	14,019 R	...	...
GST paid on purchases by tourists	9 R	659 R	404 R	1,072 R	...	...
Total tourism expenditure by type of tourist	1,776 R	6,546 R	6,769 R	15,091 R	...	...
2002						
Accommodation services	160 R	417 R	848 R	1,426 R	1,491 R	0.96 R
Food and beverage serving services	61 R	632 R	1,078 R	1,772 R	4,281 R	0.41 R
Air passenger transport	744 R	512 R	2,029 R	3,285 R	3,372 R	0.97 R
Other passenger transport	657 R	384 R	685 R	1,726 R	2,222 R	0.78 R
Retail sales – fuel and other automotive products	111 R	1,033 R	170 R	1,314 R	6,462 R	0.20 R
Retail sales – other	- R	2,237 R	1,150 R	3,387 R	68,223 R	0.05 R
Other tourism products	131 R	740 R	733 R	1,605 R	34,528 R	0.05 R
Total tourism demand by type of tourist excluding GST	1,865 R	5,956 R	6,694 R	14,515 R	...	...
GST paid on purchases by tourists	9 R	649 R	454 R	1,112 R	...	...
Total tourism expenditure by type of tourist	1,874 R	6,604 R	7,148 R	15,626 R	...	...
2003						
Accommodation services	157	436	909	1,502	1,582	0.95
Food and beverage serving services	60	712	1,156	1,928	4,626	0.42
Air passenger transport	803	555	1,957	3,315	3,405	0.97
Other passenger transport	670	408	736	1,814	2,332	0.78
Retail sales – fuel and other automotive products	109	1,050	182	1,340	6,794	0.20
Retail sales – other	-	2,466	1,231	3,697	70,583	0.05
Other tourism products	128	810	784	1,722	35,718	0.05
Total tourism demand by type of tourist excluding GST	1,926	6,437	6,956	15,319	...	...
GST paid on purchases by tourists	9	715	487	1,211	...	...
Total tourism expenditure by type of tourist	1,935	7,152	7,442	16,530	...	...

(1) All values are in producer prices.

Tourism supply

Tourism supply by industry is derived by multiplying the total supply of each product by the tourism product ratios from table 4.

In TSA99, TSA00 and TSA01, the value of total supply by product by industry was sourced from the input-output tables from these years.

As no input-output tables were available for use in TSA02 and TSA03, an initial estimate of supply by product by industry was made from a variety of sources (covered in detail in Appendix B: Methodology).

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 D: Tourism industry concordance, for detailed listings).

Total supply and tourism supply by product are shown in table 5 for the years ending March 1999 to March 2003.

Table 5

Derivation of Tourism Supply⁽¹⁾
Year ended March

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)			
1999									
Accommodation services	932 R	202 R	-	1,135 R	0.95	882	191	-	1,073 R
Food and beverage serving services	2,767 R	998 R	-	3,765 R	0.37	1,049	333	-	1,383 R
Air passenger transport	2,772 R	44 R	-	2,816 R	0.96	2,668	27	-	2,695 R
Other passenger transport	1,734 R	24 R	-	1,757 R	0.77	1,331	15	-	1,346 R
Retail sales – fuel and other automotive products	22 R	3,669 R	732 R	4,423 R	0.24	5	906	145	1,056 R
Retail sales – other	485 R	43,522 R	11,126 R	55,134 R	0.05	41	2,072	524	2,637 R
Other tourism products	1,948 R	26,186 R	-	28,135 R	0.04	296	961	-	1,256 R
Total tourism products	10,660 R	74,645 R	11,858 R	97,165 R	...	6,272	4,506	668	11,447
2000									
Accommodation services	1,039 R	250 R	-	1,289 R	0.94	978	236	-	1,214 R
Food and beverage serving services	2,916 R	1,035 R	-	3,951 R	0.39	1,175	364	-	1,539 R
Air passenger transport	3,072 R	50 R	-	3,122 R	0.97	3,009	31	-	3,040 R
Other passenger transport	1,870 R	26 R	-	1,896 R	0.77	1,452	17	-	1,469 R
Retail sales – fuel and other automotive products	24 R	3,775 R	1,084 R	4,883 R	0.24	5	947	205	1,157 R
Retail sales – other	562 R	45,419 R	12,725 R	58,706 R	0.05	49	2,229	608	2,887 R
Other tourism products	2,116 R	27,883 R	-	29,999 R	0.05	323	1,065	-	1,388 R
Total tourism products	11,598 R	78,438 R	13,809 R	103,845 R	...	6,993	4,888	814	12,695

(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 level of product than shown.

Table 5
continued

Derivation of Tourism Supply⁽¹⁾
Year ended March

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)			
2001									
Accommodation services	1,105 R	276 R	-	1,382 R	0.95	1,049	262	-	1,311 R
Food and beverage serving services	2,972 R	1,116 R	-	4,088 R	0.41	1,252	426	-	1,679 R
Air passenger transport	3,489 R	58 R	-	3,546 R	0.97	3,403	34	-	3,437 R
Other passenger transport	2,035 R	28 R	-	2,063 R	0.78	1,587	18	-	1,605 R
Retail sales – fuel and other automotive products	26 R	4,833 R	1,464	6,323 R	0.21	5	1,057	252	1,313 R
Retail sales – other	643 R	50,346 R	14,150	65,138 R	0.05	56	2,446	672	3,174 R
Other tourism products	2,351 R	29,944 R	-	32,295 R	0.05	357	1,141	-	1,498 R
Total tourism products	12,622 R	86,600 R	15,614	114,835 R	...	7,710	5,385	923	14,019
2002									
Accommodation services	1,192 R	299 R	-	1,491 R	0.96	1,139	286	-	1,426 R
Food and beverage serving services	3,078 R	1,203 R	-	4,281 R	0.41	1,308	464	-	1,772 R
Air passenger transport	3,314 R	58 R	-	3,372 R	0.97	3,252	33	-	3,285 R
Other passenger transport	1,809 R	413 R	-	2,222 R	0.78	1,385	341	-	1,726 R
Retail sales – fuel and other automotive products	4 R	5,016 R	1,441	6,462 R	0.20	1	1,073	240	1,314 R
Retail sales – other	719 R	53,169 R	14,335	68,223 R	0.05	58	2,620	709	3,387 R
Other tourism products	2,712 R	31,815 R	-	34,528 R	0.05	379	1,226	-	1,605 R
Total tourism products	12,828 R	91,974 R	15,776	120,578	...	7,522	6,043	949	14,515
2003									
Accommodation services	1,263 R	319 R	-	1,582 R	0.95	1,199	303	-	1,502 R
Food and beverage serving services	3,465 R	1,161 R	-	4,626 R	0.42	1,477	451	-	1,928 R
Air passenger transport	3,345 R	61 R	-	3,405 R	0.97	3,281	34	-	3,315 R
Other passenger transport	1,897 R	435 R	-	2,332 R	0.78	1,454	361	-	1,814 R
Retail sales – fuel and other automotive products	5 R	5,308 R	1,481	6,794 R	0.20	1	1,101	239	1,340 R
Retail sales – other	745 R	54,943 R	14,895	70,583 R	0.05	67	2,819	811	3,697 R
Other tourism products	3,093 R	32,625 R	-	35,718 R	0.05	423	1,299	-	1,722 R
Total tourism products	13,813 R	94,852 R	16,375	125,040	...	7,902	6,367	1,050	15,319

(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 level of product than shown.

Points to note from table 5:

- Non-tourists also buy goods and services that are bought by tourists. The tourism product ratio indicates the proportion of the supply of a product that is purchased by tourists. In 2003, for example, the tourism product ratio for accommodation services was 0.95. This means that almost all accommodation supplied was bought by tourists. By contrast, tourists purchased only 20 percent of retail supplies of fuels and related automotive products.
- Tourism supply rose 5.5 percent in the March 2003 year. Tourism supply of tourism products increased at a faster rate than total supply between 1999 and 2003.
- Total supply of tourism products increased significantly in 2001, recording a rise of 10.6 percent. This was followed by rises of 5.0 and 3.7 percent in 2002 and 2003, respectively.

Direct tourism value added

Direct tourism value added calculations are done at a finer level of industry detail than is presented in table 6.

- 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 6 for the years 1999 to 2003.

Table 6

Direct Tourism Value Added

Item	Year ended March					Annual percentage change			
	1999	2000	2001	2002	2003	2000	2001	2002	2003
	\$(million)					Percent			
Published GDP	102,465 R	108,570 R	114,842 R	123,736 R	129,579	6.0	5.8	7.7	4.7
Less GST, import duties and other taxes on production	7,452 R	7,884 R	8,202 R	8,750 R	9,565	5.8	4.0	6.7	9.3
Gives contribution to GDP from production	95,013 R	100,686 R	106,640 R	114,986 R	120,014	6.0	5.9	7.8	4.4
Tourism output of tourism characteristic industries	6,272 R	6,992 R	7,709 R	7,522 R	7,902	11.5	10.3	-2.4	5.1
Less tourism intermediate consumption of tourism characteristic industries	3,905 R	4,395 R	5,076 R	5,062 R	5,065	12.5	15.5	-0.3	0.1
Gives direct tourism value added of tourism characteristic industries	2,367 R	2,597 R	2,633 R	2,460 R	2,838	9.7	1.4	-6.6	15.3
Plus direct tourism value added of all other industries	2,141 R	2,319 R	2,440 R	2,846 R	3,044	8.3	5.2	16.6	7.0
Gives total direct tourism value added	4,508 R	4,916 R	5,074 R	5,307 R	5,882	9.0	3.2	4.6	10.8
Direct tourism value added as a percentage of total industry contribution to GDP	4.7% R	4.9% R	4.8% R	4.6% R	4.9%	...	...	...	...

Points to note from table 6:

- Between 1999 and 2003, direct tourism value added (also called tourism's direct contribution to GDP) increased by 30.5 percent, a faster rate than the total of all industries' contribution to GDP, which grew by 26.5 percent. This is reflected in the increase in the ratio of direct tourism value added to total contribution to GDP, from 4.7 percent in 1999 to 4.9 percent in 2003.
- In 2000 and 2003, direct tourism value added as a percentage of total industry contribution to GDP was 4.9 percent. During both those years, New Zealand hosted the America's Cup yachting regatta in Auckland.

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, total expenditure on goods and services by tourists, \$16,530 million in 2003, consisted of three direct components:

- Direct tourism output of \$14,267 million, representing the producers' value of goods and services produced in New Zealand and directly purchased by tourists. This domestic production required the use of \$8,385 million intermediate inputs, giving \$5,882 million direct tourism value added. This represents the value producers in New Zealand add to inputs used in producing the goods and services bought by tourists.
- Imports totalling \$1,052 million sold directly to tourists by retailers.
- Non-deductible GST of \$1,211 million paid on goods and services bought by tourists.

Indirect tourism value added and imports

For some analysis, interest lies in a broader measure of tourism value added. Such a broader 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 affected 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 induced by the initial 'round' of tourism spending.

Estimating indirect tourism value added involves tracing the flow-on effects of the intermediate purchases of those businesses directly producing tourism products (\$8,385 million in 2003) and measuring the cumulative value added these purchases generate. For example, included in the \$8,385 million are the intermediate purchases of the accommodation, cafes and restaurants industry. These include items such as electricity, bedding and food purchased from other industries or imported. These other industries, in turn, will have made intermediate purchases from other industries (or from overseas) in order to produce the items they sell to the accommodation, cafes and restaurants industry ... and 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 must be able to be explained in terms of (i) direct tourism value added; (ii) indirect tourism value added; (iii) imports (both those directly sold to tourists and those used indirectly in production); and (iv) GST.

Note that some of the indirect demand for intermediate inputs will not be met by the output of New Zealand producers, but by imports. Such demand will not result in any indirect contribution to New Zealand's GDP.

Table 7 summarises the relationship between the various concepts.

Table 7

Components of Tourism Expenditure

Item	Year ended March					Annual percentage change			
	1999	2000	2001	2002	2003	2000	2001	2002	2003
	\$(million)					Percent			
Direct tourism value added	4,508 R	4,916 R	5,074 R	5,307 R	5,882	9.0	3.2	4.6	10.8
Indirect tourism value added	4,130 R	4,616 R	5,417 R	5,574 R	5,605	11.8	17.4	2.9	0.6
Imports sold directly to tourists by retailers	668 R	814 R	923 R	949 R	1,052	21.8	13.4	2.9	10.7
Imports used in production of goods and services sold to tourists	2,141 R	2,350 R	2,605 R	2,684 R	2,780	9.8	10.9	3.0	3.6
GST on purchases by tourists	888 R	978 R	1,072 R	1,112 R	1,211	10.2	9.6	3.7	9.0
Total tourism expenditure	12,335 R	13,673 R	15,091 R	15,626 R	16,530	10.9	10.4	3.5	5.8

The components do not always move in the same way as total tourism expenditure. Changes in 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 2003, direct tourism value added grew at a faster rate (10.8 percent) than expenditure (5.8 percent) because an increasing proportion of growth in tourism demand was met by industries with relatively high ratios of value added to output. Consequently, in 2003, the use of intermediate inputs grew at a slower rate than direct value added. As the use of intermediate inputs in turn flows into indirect value added, this also shows a lower rate of growth.

Movements in the value of imports directly on-sold to tourists are strongly dependent on changes in the mix of products purchased. For example, in the March 2003 year, imports sold directly to tourists by retailers increased by 10.7 percent, while total tourism expenditure grew by 5.8 percent.

Alternatively, the components can be represented by their percentage contribution to tourism expenditure. Table 8 shows this for the years 1999 to 2003.

Table 8

Breaking Down Tourism Expenditure

Item	Year ended March				
	1999	2000	2001	2002	2003
	Percent				
Total tourism expenditure	100	100	100	100	100.0
Direct tourism value added	36.5	36.0	33.6	34.0	35.6
Indirect tourism value added	33.5	33.8	35.9	35.7	33.9
Imports sold directly to tourists by retailers	5.4	6.0	6.1	6.1	6.4
Imports used in production of goods and services sold to tourists	17.4	17.2	17.3	17.2	16.8
GST on purchases by tourists	7.2	7.2	7.1	7.1	7.3

In the 2003 March year, direct tourism value added is the dominant component of tourism expenditure, while in 2001 and 2002 indirect tourism value added was dominant.

Direct tourism employment

Table 9 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. By convention, a full-time employee makes up one FTE employee, while a part-time employee makes up a 0.5 FTE employee. A full-time employee is defined as an employee who works more than 30 hours a week, while a part-time employee is one who works fewer than 30 hours a week.

Table 9

Direct Tourism Employment⁽¹⁾⁽²⁾⁽³⁾

	Year ended March					Annual percentage change			
	1999	2000	2001	2002	2003	2000	2001	2002	2003
Total employment									
Full-time employees	1,038,423	1,058,308	1,091,775	1,129,926	1,164,789	1.9	3.2	3.5	3.1
Part-time employees	330,985	328,876	325,932	346,268	354,242	-0.6	-0.9	6.2	2.3
FTE employees	1,203,915	1,222,747	1,254,741	1,303,060	1,341,910	1.6	2.6	3.9	3.0
Full-time working proprietors	283,972	293,796	295,140	287,161	291,571	3.5	0.5	-2.7	1.5
Part-time working proprietors	74,022	75,471	76,682	75,972	73,248	2.0	1.6	-0.9	-3.6
FTE working proprietors	320,983	331,532	333,481	325,147	328,195	3.3	0.6	-2.5	0.9
Total FTE persons engaged	1,524,898	1,554,279	1,588,222	1,628,207	1,670,105	1.9	2.2	2.5	2.6
Tourism employment⁽⁴⁾									
Tourism full-time employees	51,059	55,339	56,818	57,885	60,758	8.4	2.7	1.9	5.0
Tourism part-time employees	40,709	44,158	45,615	46,251	46,625	8.5	3.3	1.4	0.8
Tourism FTE employees	71,414	77,418	79,625	81,011	84,070	8.4	2.9	1.7	3.8
Tourism full-time working proprietors	14,637	16,692	16,623	16,568	17,365	14.0	-0.4	-0.3	4.8
Tourism part-time working proprietors	4,201	4,748	4,779	4,876	5,115	13.0	0.7	2.0	4.9
Tourism FTE working proprietors	16,737	19,066	19,013	19,007	19,923	13.9	-0.3	0.0	4.8
Total FTE persons directly engaged in tourism	88,151	96,484	98,638	100,017	103,992	9.5	2.2	1.4	4.0
FTE persons directly engaged in tourism as a percentage of total FTE persons engaged in New Zealand	5.8%	6.2%	6.2%	6.1%	6.2%	...	...	...	...

1. Total FTE persons engaged is sourced from the Household Labour Force Survey (HLFS).

2. Totals may not add due to rounding.

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

4. Tourism employment statistics are as at February and are sourced from the Statistics New Zealand Annual Business Frame Update Survey. Persons engaged for the water transport and agriculture industries are not available from the Annual Business Frame Update Survey as parts of the industry are not surveyed. As a result, persons engaged for these industries are sourced from an unpublished Statistics New Zealand labour input research series.

Tourism industry ratios have been used to allocate employment numbers by industry to tourism. This treatment assumes that a given quantity of output by an industry will require a fixed amount of labour input, regardless of the type of product.

Points to note from table 9:

- There were 103,992 FTE persons directly engaged in tourism in 2003. Direct tourism employment increased 18.0 percent between 1999 and 2003. Total FTE persons engaged in tourism in New Zealand grew by 9.5 percent during the same period. This indicates that over the past five years, the tourism sector has become increasingly important as an employment generator.
- The number of persons engaged in tourism does not necessarily show the same movement as total tourism expenditure or direct value added. In 2003, for example, direct tourism value added increased by 10.8 percent, while FTE persons directly engaged in tourism rose by only 4.0 percent. This difference may be the result of a number of factors. For example, there may be a lag between growth in a given industry and decisions made to employ new staff. Alternatively, there may be a shift in the number of hours worked, or in output per FTE. Also, the convention of defining a part-time employee as equivalent to 0.5 FTEs may not always be a true representation of the differences in hours worked.

Appendix A

Conceptual Framework

Definitions

Tourism Satellite Account 2000–2003 (TSA00–03) has been based on the methodology produced by the World Tourism Organisation (WTO) in its publication *Tourism Satellite Account (TSA) – The Conceptual 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 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* (SNA93). 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 SNA93 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 types of persons are not considered visitors:

- 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 the carrying out of a business activity.
- A domestic **business** tourist is a domestic tourist and an employee of a private sector enterprise whose purpose of travel is the carrying out of 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 the carrying out of 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 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, be:

- travelling by a scheduled flight or inter-island ferry service
- travelling more than 40 kilometres from their residence (one way) and travelling outside the area they commute to for work or visit daily
- travelling 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 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 goods 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 good includes:

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

In other words, the full (GST-exclusive) purchase price of the good 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.

It should be noted that in a TSA 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 demand.

Valuation basis used in tourism satellite accounts

Tourism expenditure in TSAs is initially measured in purchasers' 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 NZSNA and tourism satellite accounts 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 good or service consumed by tourists. It provides the means of classifying tourism products outlined below.

Classifying products sold to tourists

TSA's 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 a tourism-specific product. It is assumed in TSA00–03 that none of these products is purchased by tourists.

A full list of tourism-characteristic and tourism-related products is presented in Appendix C: 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 6 in Appendix C: 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).
- 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.
- It is important to note that 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 D: 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 GDP which 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 are not the same and 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
equals	indirect tourism value added.

*Appendix B***Methodology****Direct tourism value added**

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

Direct tourism expenditure measures the value of the products purchased as a result of tourism, 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 the intermediate inputs used in producing these tourism products. This shows the 'value' a producer adds to the raw material goods and services it uses in the process of production.

Tables 2, 4, 5 and 6 in the Results section detail the process used to calculate direct tourism value added. This involves the following steps:

- Total tourism expenditure by product by year is calculated and presented in table 2. Tourism expenditure by product by type of tourist is also shown in table 4.
- Total production of tourism goods and services by supplying industry is estimated.
- Each industry's supply by product is multiplied by the tourism product ratio (the proportion of total supply of each product purchased by tourists) to calculate tourism supply by industry. Table 5 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 6 presents total tourism value added resulting from tourism-characteristic industries and all other industries.

The following methodological information on the calculation of direct tourism value added is ordered according to the steps above.

The same methodology underlies the calculation of direct tourism value added for final and provisional accounts. 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 input-output tables 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 input-output tables means the supply of each product by industry cannot be estimated 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 an input-output table 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 4 presents tourism expenditure by product by type of tourist. Expenditure by the three types of tourist was calculated as described in the following sections.

International tourism expenditure

Final accounts

Expenditure by overseas tourists in New Zealand was derived from the International Visitors Survey (IVS) published by Tourism New Zealand. This sample survey was extrapolated up to full population estimates using migration data. The IVS data was also supplemented with breakdowns from input-output tables, Consumers Price Index (CPI) weightings and tourism producers' own data. In some instances, tourism producers were able to provide estimates of the proportions of their output consumed by international visitors. Broad level estimates of international visitors' expenditure in New Zealand were 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 were also used to compile these statistics. TSA totals were obtained after excluding people who were visiting New Zealand specifically to obtain medical treatment (an adjustment needed because of a conceptual difference between TSA and BoP statistics). These totals were then broken into tourism products. The initial breakdown came from the IVS, which broke down expenditure into 10 major groups (for example, transport, meals, sightseeing). These expenditures were further split into TSA tourism products using proportions from input-output tables. These splits were compared with other data sources, and alterations made where better estimates were found.

Provisional accounts

The same basic data source, the IVS, was also used in the provisional accounts. However, in the absence of a contemporary input-output study, the IVS was not broken down to the same level of product detail found in final accounts. The breakdown derived for the latest final account was used to estimate the initial product breakdown for the provisional years. This initial product breakdown was subsequently modified during the balancing process (covered in more detail later in this section).

Tourism expenditure by international students

All years from 1999

Tourism expenditure by international students studying for less than one year 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 to collect information on the expenditure of international students studying at New Zealand English language schools, categorised by tuition and other fees, and accommodation costs.
- 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 and living costs is calculated using balance of payments data and methodology. The BoP estimates include course costs and living costs per student for students studying at schools, tertiary institutions, private English Language Providers and for those on study tours.
- Expenditure on airfares is derived using BoP transportation credits data. Expenditure on airfares by students in New Zealand for less than one year is obtained as a proportion of the total airfare income of resident airlines.
- Total tourism expenditure by international students in New Zealand for less than one year is the sum of the estimates of expenditure on course fees, living costs and airfares.

Household tourism expenditure

Household tourism expenditure, shown as household demand in table 2, is made up of four components. These are:

Household domestic travel expenditure

Final accounts

The major data source used in the calculation of household travel expenditure was the New Zealand Domestic Travel Study (DTS). This data was supplemented with data from the Household Economic Survey (HES) and other data sources. The DTS also provides supplementary information for the calculation of domestic travel by business and government. DTS data collection started in 1999 and is currently available as a quarterly series. In order to calculate household travel expenditure for the 1999 March year, DTS expenditure was extrapolated backwards. This was done by matching, as closely as possible, product expenditure data from the DTS with Household Consumption Expenditure (HCE) product categories used in the national accounts. For example, the DTS 'recreation' product category was extrapolated back using movements in the sum of the HCE recreation and leisure product categories. The use of current price HCE expenditure movements meant that changes in both price and quantity of household purchases were accounted for. In addition, an assumption was made that changes in total household demand (tourism plus non-tourism purchases) for travel items reflected changes in 'tourism' purchases of those items.

The household domestic travel expenditure was then split into tourism-specific products to allow comparison with the supply side data. A number of data sources were used to produce the finer level product breakdown, including input-output tables, the HES, previous TSAs, Consumers Price Index weightings and the DTS. The DTS does not capture all types of household tourism expenditure, so separate estimates were 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.

Provisional accounts

Total domestic household travel expenditure for provisional March years was calculated by applying movements in the quarterly DTS to the latest final account domestic household expenditure values. The DTS does not capture all types of household tourism expenditure, so separate estimates were 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. Other data sources, such as annual reports and the HES, were also incorporated into the calculations. This mechanism provided the initial product breakdown, which was subsequently modified during the balancing process (covered in more detail later in this section).

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 was estimated from a variety of sources, including company annual reports, BoP data and the HES.

Provisional accounts

Household outbound tourism expenditure for provisional accounts was estimated by using product breakdowns from the latest final account to split household consumption expenditure groupings. For example, household tourism expenditure on travel insurance was held as a constant proportion of total household consumption expenditure on insurance. This mechanism provided the initial product breakdown, which was subsequently modified during the balancing process (covered in more detail later in this section).

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 were based on data from the HES and were calculated in addition to the on-trip purchases of these goods. Off-trip tourism expenditure is defined in Appendix A. Further discussion on consumer durables in the TSA may be found in the Special treatments section later in this appendix.

Provisional accounts

Domestic household purchases of tourism-specific consumer durables for provisional accounts were estimated by using product breakdowns from the latest final account to split household consumption expenditure groupings. For example, household tourism expenditure on consumer durables was held as a constant proportion of total household consumption expenditure on similar durable items. This mechanism provided the initial product breakdown, which was subsequently modified during the balancing process (covered in more detail later in this section).

Imputed rental on holiday homes*All years*

The TSA includes an imputed rental on dwellings owned by households that are used as holiday homes. Further discussion on this imputation is contained in the Special treatments section later in this appendix. The total number of holiday homes was calculated using data from population censuses. The imputed rental price was calculated using census data and movements in the relevant producers price index. The number of holiday homes was multiplied by the imputed rental price to give the imputed rental value.

Business and government travel expenditure*Final accounts*

Business travel expenditure was drawn from intermediate consumption by product of the private sector industries in the input-output tables. This was supplemented by other data sources, including the Annual Enterprise Survey, and the DTS.

Travel expenditure by central government agencies and departments (that is, non-market units) was calculated by directly surveying a sample of agencies and applying the results across all government agencies. Travel expenditure by central government market units used the same input-output table-based method as for business travel.

Travel expenditure by local authority non-market units was 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 used the same input-output table-based method as for business travel.

Provisional accounts

Travel expenditure is part of the intermediate consumption of businesses and government. In the absence of input-output tables, intermediate consumption was first estimated using a variety of data sources, including GST purchases, annual reports and results from Annual Enterprise Surveys. The ratio of travel expenses to total intermediate consumption from the latest final account was then applied. This provided the initial product breakdown, which was subsequently modified during the balancing process (covered in more detail later in this section).

Production of tourism goods and services*Final accounts*

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

Provisional accounts

Constraints on the availability of input data for provisional accounts (no input-output tables available) mean that supply by product is shown only for characteristic tourism industries and for all other industries. Without input-output tables, total output by industry was 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 was then broken down into the supply of tourism products using the latest final account breakdown of output by product and industry. This provided the initial product breakdown, which was subsequently modified during the balancing process (covered in more detail later in this section).

Balancing tourism expenditure and tourism production

Final accounts

Input-output balancing through supply-use tables 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*, “for checking the consistency of statistics on flows of goods and services obtained from quite different kinds of statistical sources”. The input-output 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 input-output 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, are reduced. Similar checking of supply and use by product, which underlies Statistics New Zealand annual input-output models, was also performed in the TSA. The TSA begins with the balanced supply-use tables, ie all products have been balanced in terms of their total supply and total use. These ‘product accounts’ are broken 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 input-output balancing is then used in the TSA to ensure that tourism supply is equal to tourism use.

A typical example of how this process was undertaken follows:

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 direct tourism demand excludes GST, so production for and expenditure on tourism products were both in producers’ prices for comparison.
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.

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

Provisional accounts

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

Calculating direct tourism value added

Direct value added is calculated by relating tourism expenditure on goods and services to the industries that supply those products. Provisional account calculations are at a more aggregated level of product than final account calculations.

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 4) 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.

As an example, take the accommodation services product. In 2003, the tourism product ratio for accommodation services (0.95) 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 estimates are themselves derived from total output by industry, and no official measure was available in these years. Table 5 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 have not been published for provisional years. Therefore, before tourism value added could be calculated, provisional production accounts for each industry were estimated. Data from a variety of sources, including GST sales and purchases, annual reports and Annual Enterprise Surveys, were 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 'characteristic tourism' and 'all other' industries. This presentation reflects the less detailed nature of the estimate 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 industries where an industry's products are relatively homogenous (where an industry makes a range of products that are very similar, requiring similar inputs). However, there will be some instances where the assumption is less valid. This is more likely to be the case where an industry has a low degree of tourism specialisation, and a diverse range of products is produced.

An alternate assumption is to relate specific inputs to outputs, ie a product technology assumption. However, this approach was 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.

Other countries have tended to use the industry technology assumption in their TSAs, although the Australian Bureau of Statistics carried out a limited form of allocating inputs to some products in their TSA. Statistics New Zealand investigated doing this for the accommodation and food and beverage serving services products, but found it created negligible differences to tourism value added at the published industry level.

Direct tourism employment

Direct tourism employment, in table 9, is derived by applying tourism industry ratios to the number of people engaged in each industry. This produced an estimate of the number of people engaged in each industry as a result of tourism.

Employment numbers (full-time persons engaged, part-time persons engaged and full-time equivalent employees engaged) by each industry were sourced from the Annual Frame Update Survey (AFUS). Exceptions were the water transport and agriculture industries, as employment for some parts of these industries was not surveyed in the AFUS. Employment numbers for these industries were taken from an unpublished Statistics New Zealand labour input series. The numbers for total employment were from the Household Labour Force Survey (HLFS).

Indirect effects of tourism

Indirect tourism value added and imports

Recall from Appendix A (Relating direct tourism value added and tourism expenditure) that the basis of a TSA's measure of indirect tourism value added (or tourism's indirect contribution to GDP) is:

	Total tourism expenditure	(table 1)
less	GST	(table 1)
equals	direct tourism demand	(table 1)
less	direct tourism value added	(table 4)
less	imported goods purchased by tourists from retailers	(table 3)
equals	indirect tourism demand	
less	imports used in production of goods/services sold to tourists	
equals	indirect tourism value added.	

The derivation of indirect tourism value added and imports used in production of goods and services sold to tourists is discussed in the following two sections.

- Imports used in production of goods and services sold to tourists. Indirect tourism imports represents those imported products not directly on-sold to tourists, but used up in producing tourism supply.

All years

The value of imports used in production of products sold to tourists was calculated using the table of cumulated import coefficients of industries and categories of final demand from 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.

- Derivation of indirect tourism value added. Indirect tourism value added may be calculated directly, or derived indirectly as a residual item. The indirect method calculates total tourism expenditure (excluding GST) and 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 was 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 was estimated by 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.

Input-output framework

Final accounts

A TSA is a rearrangement of the New Zealand System of National Accounts (NZSNA). More specifically, the tables for final accounts were derived from the annual input-output analyses of the New Zealand economy for those March years. Input-output analyses are both a statistical and economic representation of the economy, broken down by industry, product, primary input category (eg compensation of employees, consumption of fixed capital) and final demand category (such as household consumption expenditure and exports). By adopting the input-output 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 gross domestic product (GDP). Additionally, by compiling the TSA within an input-output framework, derived tables may be produced which 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 input-output structure also allows financial data on tourism to be easily linked to non-financial data such as employment. Input-output tables 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 (eg household spending). It is the starting point from which a TSA is derived.

Provisional accounts

Input-output tables are not yet available for provisional years. Only total economy-wide value added has been published for these years. Therefore, estimates had to be made of the supply of products sold to tourists by industry. This involved:

- Estimating the output of each industry (as outlined earlier in the section).
- Breaking down total output into supply of each tourism product using the industry output breakdown from the latest available input-output analysis. This provided the initial product breakdown, which was subsequently modified during the balancing process.
- Estimating value added by industry within the constraint of published total value added.

The absence of balanced input-output tables resulted 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 the retailer for goods and the retailer's margin added to this price. The treatment adopted in a TSA is that the full gross value of the retail product purchased is shown as direct tourism expenditure, ie 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, say a tourist purchased a jersey for \$100, of which \$10 was the retailer's mark-up (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 on-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 high-value consumer durables purchased 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 A) 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 estimate makes some attempt to take this into consideration, there is little hard data with which to refine the estimate. 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. 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 C: 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 people renting versus owning homes (otherwise, an increase in the number of people 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 (eg 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 on-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 on-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

TSAs do 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 service 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) a very detailed functional breakdown of the expenditure of government and non-profit institutions, ie separately identifying those entities which provide 'individualised' services, and (b) splitting this expenditure between tourist and non-tourist consumption.

The identification of 'individualised' and 'collective' non-market consumption is a SNA93 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 estimated in future.

Appendix C

Product Classification

For a provisional TSA, tourism product information is less detailed than for final accounts. Table 10 shows these distinctions. The inclusions and exclusions are not exhaustive, but are intended to clarify coverage from a tourism perspective.

Table 10

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 10
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	
	Other tourism-related services	Telecommunications, postal and courier services and other tourism products, including spending on education by international students studying in New Zealand for less than 12 months	Health and medical services
	Other personal services	Laundry services, film processing, hairdressing and beauty services	

Appendix D

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 TSA, tourism industry information is more aggregated than for final accounts. This is shown in table 11.

Table 11

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, cafes and restaurants	H571	Accommodation	
			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		All other ANZSIC industries

Glossary

National accounts definitions

Basic price

The amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable. It excludes any transport charges invoiced separately by the producer.

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

This represents 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

This residual item, is 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 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 purchaser's values.

Output

Output consists of 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.

Producer values

The equivalent of purchaser values (see below), reduced by the trade and transport margins for delivering the items from producer to purchaser. This effectively gives the market sales value for the producer at the factory door, farm gate, mine head, and so on. For services, the producer value is the same as the purchaser value, as services are produced and consumed at the same time.

Purchaser values

The costs in the market of goods and services on delivery to the purchaser. For services, the purchaser value is the same as the producer value, as services are produced and consumed at the same time.

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 which 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 (ie 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:	<i>Australian and New Zealand Standard Commodity Classification</i>
ANZSIC:	<i>Australian and New Zealand Standard Industry Classification</i>
BoP:	Balance of Payments
CPI:	Consumers Price Index
DTS:	New Zealand Domestic Travel Study
GDP:	Gross domestic product
HCE:	Household Consumption Expenditure
HES:	Household Economic Survey
HLFS:	Household Labour Force Survey
IO96:	Input-output tables for 1996
IO97:	Input-output tables for 1997
IO98:	Input-output tables for 1998
IO99:	Input-output tables for 1999
IO00:	Input-output tables for 2000
IO01:	Input-output tables for 2001
ISIC:	<i>International Standard Industrial Classification</i>
IVS:	International Visitors Survey
NZSIC:	<i>New Zealand Standard Industry Classification</i>
NZSNA:	<i>New Zealand System of National Accounts</i>
OECD:	Organisation of Economic Co-operation and Development
SNA93:	<i>System of National Accounts 1993</i>
TSA:	Tourism Satellite Account
TSA95:	<i>New Zealand Tourism Satellite Account 1995</i>
TSA97:	<i>New Zealand Tourism Satellite Account 1997</i>
TSA97–99:	<i>New Zealand Tourism Satellite Account 1997–1999</i>
TSA00–02:	<i>New Zealand Provisional Tourism Satellite Account 2000–2002</i>
WTO:	World Tourism Organisation

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