



Tourism Satellite Account: 2016

The contribution made by tourism
to the New Zealand economy



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Citation

Statistics New Zealand (2016). *Tourism Satellite Account: 2016*. Wellington: Statistics New Zealand. Available from www.stats.govt.nz.

ISSN 1175-530X (print)
ISSN 1177-6226 (online)

Published in October 2016 by

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Contents

- List of tables and figures4**
- 1 About the tourism satellite account6**
 - Purpose.....6
 - What is a tourism satellite account?6
 - Value added.....7
- 2 Summary results.....8**
 - Revisions8
 - Key results by topic for the year ended March 2016.....10
 - Key events that influenced tourism for years ended March 2013–16.....24
- 3 Tourism expenditure27**
- 4 Tourism supply32**
- 5 Tourism value added.....35**
 - Direct tourism value added.....35
 - Indirect tourism value added and imports36
- 6 Tourism employment39**
- 7 Tourism industry profitability.....41**
- Appendix 1: Conceptual framework.....43**
- Appendix 2: Methodology50**
- Appendix 3: Tourism product classification66**
- Appendix 4: Tourism industry concordance.....70**
- Appendix 5: Detailed tables, year ended March 201373**
- Glossary82**
 - National accounts definitions.....82
 - Abbreviations used in this report84
- References and data sources85**
 - References.....85
 - Data sources.....85



List of tables and figures

Tables

1. Tourism expenditure by component, year ended March 1999–2016	10
2. Tourism expenditure by type of tourist, year ended March 1999–2016.....	12
3. International tourism expenditure compared with selected primary exports, year ended March 1999–2016.....	14
4. International student expenditure – studying less than 12 months, year ended March 1999–2016.....	16
5. Tourism employment, year ended March 2000–16.....	18
6. Overseas visitor arrivals, year ended March 2013–16.....	20
7. Selected overseas visitor arrivals, year ended March 2013–16	22
8. Guest nights, year ended March 2013–16	23
9. Tourism expenditure by type of product, year ended March 2013–16	27
10. Tourism expenditure, by type of product and type of tourist, year ended March 2013–16	29
11. Derivation of tourism supply from total supply, year ended March 2013–16.....	33
12. Direct tourism value added, year ended March 2013–16	35
13. Tourism expenditure by component, year ended March 2013–16	37
14. Share of tourism expenditure by component, year ended March 2013–16.....	38
15. Direct tourism employment, year ended March 2013–16	40
16. Tourism gross operating surplus as a percentage of total tourism output, year ended March 2009–13.....	41
17. Tourism product classification	66
18. Tourism industry concordance	70
19. Tourism expenditure, by type of product and type of tourist, year ended March 2013	74
20. New Zealand System of National Accounts production accounts, by industry, year ended March 2013.....	75
21. Sales by type of product and industry, sales by type of product and industry, year ended March 2013.....	76
22. Derivation of tourism product ratios, year ended March 2013	77
23. Derivation of tourism industry ratios, year ended March 2013	78
24. Derivation of direct tourism value added, year ended March 2013	79
25. Direct tourism employment, by industry, year ended March 2013.....	80
26. Gross fixed capital formation and net capital stock, by industry, year ended March 2013	81

Figures

1. Flows of tourism expenditure through the New Zealand economy, year ended March 2016.....	9
2. Share of tourism expenditure by component, year ended March 2016.....	11
3. Tourism expenditure by type of tourist, year ended March 2007–16	13
4. International tourism expenditure compared with selected primary exports, year ended March 2013–16.....	15
5. International student expenditure – studying less than 12 months and international tourism expenditure, year ended March 2013–16.....	17
6. Number of people employed in tourism, year ended March 2007–16.....	19
7. Overseas visitor arrivals by region of residence, year ended March 2013–16.....	21
8. Selected overseas visitor arrivals by country of residence, year ended March 2013–16.....	22
9. Guest nights, by origin, year ended March 2013–16	23
10. Share of tourism expenditure by type of product, year ended March 2016.....	28
11. Share of tourism demand by type of product and type of tourist, year ended March 2016.....	31
12. Tourism gross operating surplus as a percentage of total tourism output, year ended March 2009–13.....	42



1 About the tourism satellite account

Purpose

Tourism Satellite Account: 2016 provides a picture of the role tourism plays in New Zealand, with information on the changing levels and impact of tourism activity. It presents information on tourism's contribution to the New Zealand economy in terms of expenditure and employment. Results cover provisional figures for the years ended March 2014–16 and detailed results for 2013.

Developed and published by Statistics New Zealand, the tourism satellite account is compiled under a United Nations World Tourism Organization framework and funded by the Ministry of Business, Innovation and Employment. It is part of a core set of tourism data that provides base information for understanding and monitoring 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.

What is a tourism satellite account?

A tourism satellite account integrates data about the supply and use of tourism-related goods and services into a single format. It summarises the contribution tourism makes to production and employment, consistent and integrated with New Zealand's official national accounts. This ensures that the importance of the tourism sector is measured and understood in the context of the New Zealand economy as a whole. New Zealand's tourism satellite account (TSA) measures expenditure in New Zealand by both resident and non-resident tourists, and thus gives a picture of the overall size of the tourism industry, including its contribution to gross domestic product (GDP) and employment.

Tourism, unlike 'conventional' industries, such as agriculture or manufacturing, that are classified according to the goods and services they produce, is defined by the characteristics of the customer demanding tourism products. Tourism products can cut across standard industry definitions, and therefore require a different approach.

Satellite accounts are an extension of the core national accounts, and involve rearranging existing information in the national accounts so that an area of particular economic or social importance 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 2008* (Inter-Secretariat Working Group on National Accounts, 2008).

We present both final and provisional estimates in *Tourism Satellite Account: 2016*. The supply and use framework provides a detailed picture of the economy broken down by industry, product, primary input, and final demand categories. It is the starting point for deriving final accounts. To give a more timely picture of the impact of tourism, we prepare provisional TSAs, using fewer data sources than final year estimates. The provisional estimates are presented in a less detailed format, and are revised as relevant data sources become available. As balanced supply and use tables are completed for the relevant years (as part of the ongoing production of the New Zealand System of National Accounts), we replace provisional results with final year estimates.

Tourism Satellite Account: 2016 presents results for the years ended March 2014–16 at the aggregated provisional estimate level in current prices. Appendix 5 contains detailed results for the latest final account year (year ended March 2013).

Value added

Value added is the 'value' businesses add to the goods and services they purchase (intermediate inputs) and use in producing their own outputs. The measurement of tourism's direct value added, also known as tourism's direct contribution to GDP, is the major focus of the TSA. As direct value added for tourism is measured on the same basis as that used for industries in the national accounts, it enables a consistent comparison between the tourism industry's contribution to GDP and that of more traditional 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 businesses that have a direct relationship with tourists. Additional value added comes from tourism through producing the intermediate inputs used in producing 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.



2 Summary results

Tourism plays a significant role in the New Zealand economy in terms of producing goods and services and creating employment opportunities. Tourism expenditure includes spending by all travellers, whether they are international, resident householders, or business and government travellers. International tourism expenditure includes spending by foreign students studying in New Zealand for less than 12 months.

Key provisional estimates for the year ended March 2016:

- Total tourism expenditure was \$34.7 billion, an increase of 12.2 percent from the previous year.
- International tourism expenditure increased 19.6 percent (\$2.4 billion) to \$14.5 billion, and contributed 20.7 percent to New Zealand's total exports of goods and services.
- Domestic tourism expenditure increased 7.4 percent (\$1.4 billion) to \$20.2 billion.
- Tourism generated a direct contribution to GDP of \$12.9 billion, or 5.6 percent of GDP.
- The indirect value added of industries supporting tourism generated an additional \$9.8 billion for tourism, or 4.3 percent of GDP.
- 188,136 people were directly employed in tourism (7.5 percent of the total number of people employed in New Zealand), an increase of 3.7 percent from the previous year.
- Tourists generated \$2.8 billion in goods and services tax (GST) revenue.
- Overseas visitor arrivals to New Zealand increased 10.4 percent.

Revisions

The *Tourism Satellite Account: 2016* includes revisions made to the derivation of both the domestic and international tourism expenditure series. These revisions have caused changes to the value of tourism expenditure in the New Zealand economy, and affected the official TSA time series back to 1999.

Revisions to the expenditure series reflect:

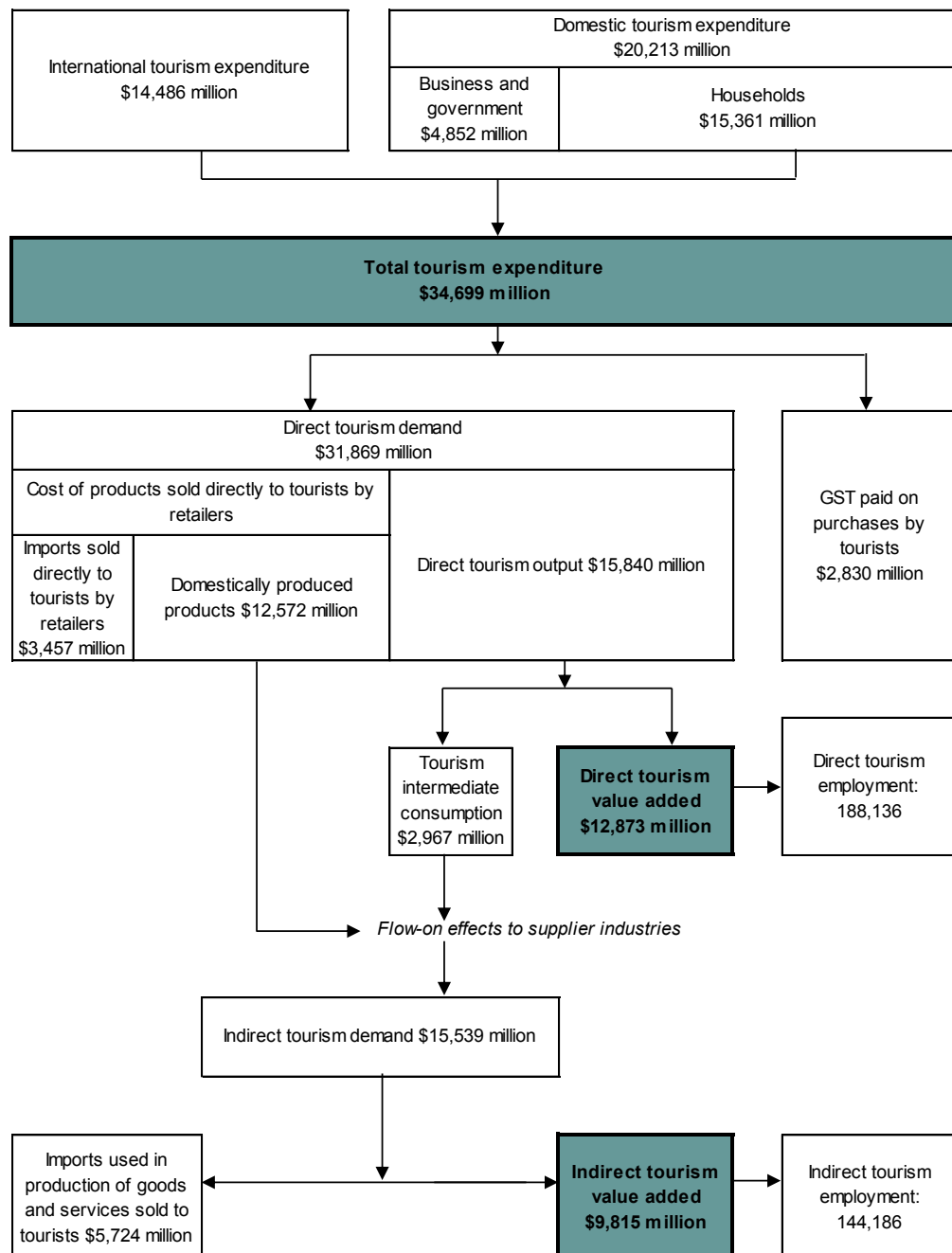
- methodological refinements to the Household Tourism Expenditure Estimates (HTEE) data sources including the incorporation of 2015 Annual Enterprise Survey (AES) data
- changes to source data used to derive international student expenditure from 2004
- methodological improvements made in 2015 to national accounts and nominal GDP statistics.

Tourism industry ratios have changed because of these revisions. These ratios are the proportion of an industry's output that is consumed by tourists and are used to calculate value added and tourism employment estimates. As a result of the ratio changes, we have revised the value added time series back to 1999. Together with the ratio changes, we have revised the tourism employment time series back to 2000.

Figure 1 traces the flows of tourism expenditure through the New Zealand economy for the year ended March 2016. It shows the value tourism adds to the New Zealand economy, both directly and indirectly, the GST received by government, the imports of goods and services, and direct and indirect employment.

Figure 1

Flows of tourism expenditure through the New Zealand economy⁽¹⁾⁽²⁾
Year ended March 2016



1. Totals may not add to the stated totals, due to rounding.

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

Source: Statistics New Zealand

Key results by topic for the year ended March 2016

Tourism expenditure

Total tourism expenditure increased 12.2 percent to \$34.7 billion, following an increase of 10.3 percent in the March 2015 year.

Tourism expenditure generated \$12.9 billion of direct value added, representing a 5.6 percent contribution to GDP. A further \$9.8 billion of indirect value added activity was recorded (see table 1).

Table 1

Tourism expenditure by component⁽¹⁾

Year ended March 1999–2016

Year ended March	Direct tourism value added	Indirect tourism value added ⁽²⁾	Imports sold to tourists ⁽³⁾	GST paid on purchases by tourists	Total tourism expenditure	Value added as a percentage of total industry contribution to GDP		
						Direct tourism value added	Indirect tourism value added	Total tourism value added
	\$(million)						Percent	
1999	5,238	4,655	4,624	1,029	15,546	5.3	4.7	10.0
2000	5,800	5,130	5,537	1,134	17,601	5.5	4.9	10.4
2001	6,060	5,936	5,638	1,260	18,895	5.4	5.3	10.7
2002	6,613	6,171	6,110	1,359	20,253	5.5	5.1	10.7
2003	7,606	6,204	6,491	1,462	21,763	6.1	4.9	11.0
2004	8,121	6,256	6,188	1,507	22,073	6.1	4.7	10.7
2005	8,625	6,427	6,126	1,601	22,779	6.0	4.5	10.5
2006	8,999	6,711	6,119	1,684	23,513	6.0	4.4	10.4
2007	9,360	7,136	6,503	1,765	24,765	5.9	4.5	10.4
2008	9,988	7,664	6,393	1,814	25,859	5.8	4.4	10.2
2009	9,305	7,034	8,180	1,862	26,381	5.3	4.0	9.3
2010	9,601	7,309	6,764	1,812	25,487	5.3	4.1	9.4
2011	9,808	7,440	6,876	1,984	26,108	5.2	4.0	9.2
2012	10,091	7,692	6,638	2,168	26,589	5.2	3.9	9.1
2013	10,343	7,908	6,537	2,159	26,947	5.2	4.0	9.1
2014	10,868	8,290	6,639	2,242	28,039	5.1	3.9	9.0
2015	11,508	8,749	8,184	2,494	30,935	5.2	4.0	9.2
2016P	12,873	9,815	9,181	2,830	34,699	5.6	4.3	10.0

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

2. Results from input-output tables for 2007 have been used in the calculation of indirect tourism value added.

3. Imports used in production of goods and services sold to tourists; imports sold directly to tourists by retailers

Note:

Figures for all years prior to 2016 have been revised.

Symbol:

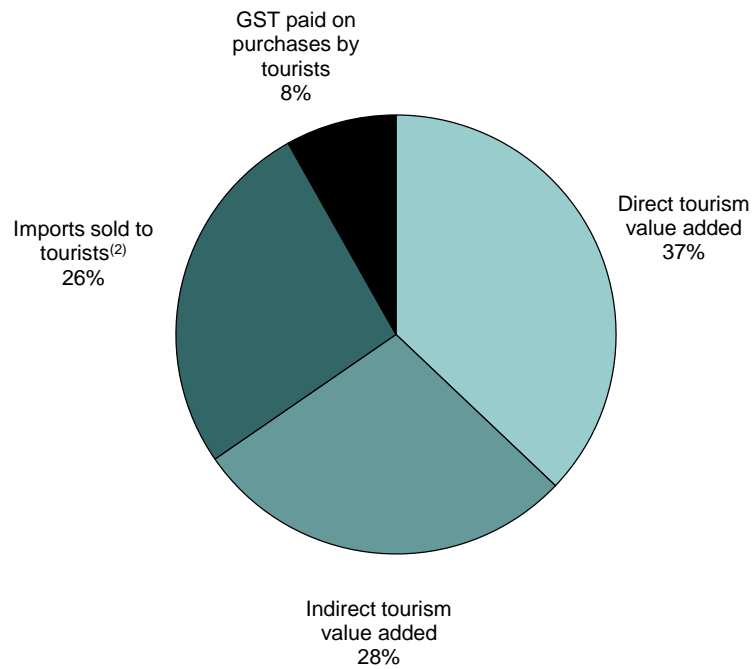
P provisional

Source: Statistics New Zealand

Direct and indirect tourism value added, when combined, accounted for 65 cents for every dollar spent by tourists, while GST accounted for 8 cents for every dollar spent by tourists. The remainder represents imports (see figure 2).

Figure 2

Share of tourism expenditure by component⁽¹⁾
Year ended March 2016



1. Individual percentages may not sum to 100 due to rounding.

2. Imports used in production of goods and services sold to tourists; imports sold directly to tourists by retailers.

Source: Statistics New Zealand

Tourism expenditure by type of tourist

International tourism expenditure increased 19.6 percent, and domestic tourism expenditure increased 7.4 percent (see table 2 and figure 3).

Table 2

Tourism expenditure by type of tourist⁽¹⁾

Year ended March 1999–2016

Year ended March	International tourism expenditure		Domestic tourism expenditure		Total tourism expenditure		Total exports of goods and services	International tourism as a percentage of total exports
	\$(million)	Annual percentage change	\$(million)	Annual percentage change	\$(million)	Annual percentage change	\$(million)	Percent
1999	5,999	...	9,547 R	...	15,546 R	...	31,639	19.0
2000	7,122	18.7	10,479 R	9.8 R	17,601 R	13.2 R	35,045	20.3
2001	8,169	14.7	10,726 R	2.4 R	18,895 R	7.4 R	42,837	19.1
2002	8,989	10.0	11,264 R	5.0 R	20,253 R	7.2 R	45,604	19.7
2003	9,494	5.6	12,269 R	8.9 R	21,763 R	7.5 R	44,403	21.4
2004	9,603 R	1.1 R	12,471 R	1.6 R	22,073 R	1.4 R	43,119	22.3 R
2005	9,987 R	4.0 R	12,792 R	2.6 R	22,779 R	3.2 R	45,662	21.9 R
2006	10,065 R	0.8 R	13,448 R	5.1 R	23,513 R	3.2 R	46,087	21.8 R
2007	10,597 R	5.3 R	14,167 R	5.3 R	24,765 R	5.3 R	50,928	20.8 R
2008	10,943 R	3.3 R	14,916 R	5.3 R	25,859 R	4.4 R	54,645	20.0 R
2009	10,857 R	-0.8 R	15,523 R	4.1 R	26,381 R	2.0 R	60,759	17.9 R
2010	10,245 R	-5.6 R	15,242 R	-1.8 R	25,487 R	-3.4 R	55,832	18.3 R
2011	10,025 R	-2.1 R	16,083 R	5.5 R	26,108 R	2.4 R	61,559	16.3 R
2012	10,094 R	0.7 R	16,495 R	2.6 R	26,589 R	1.8 R	64,749	15.6 R
2013	9,898 R	-1.9 R	17,049 R	3.4 R	26,947 R	1.3 R	62,766 R	15.8 R
2014	10,345 R	4.5 R	17,693 R	3.8 R	28,039 R	4.1 R	67,002 R	15.4 R
2015	12,114 R	17.1 R	18,821 R	6.4 R	30,935 R	10.3 R	67,514 R	17.9 R
2016P	14,486	19.6	20,213	7.4	34,699	12.2	70,144	20.7

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

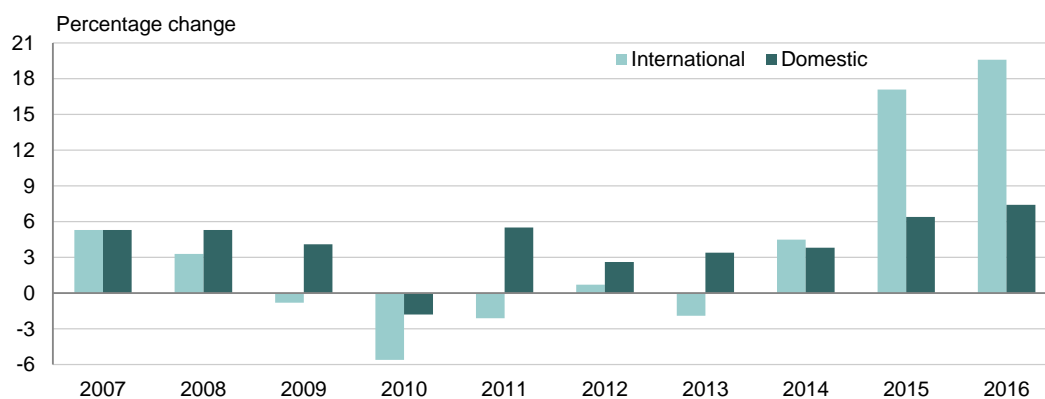
Symbols:

P provisional

R revised

... not applicable

Source: Statistics New Zealand

Figure 3**Tourism expenditure by type of tourist**
Year ended March 2007–16

Source: Statistics New Zealand

Exports

International tourism continues to be a significant export earner for New Zealand compared with other traditional export products (see table 3 and figure 4).

In the year ended March 2016, international tourism's contribution to total exports was \$14.5 billion (20.7 percent of exports). It has surpassed the export receipts from dairy products, including casein which totalled \$12.3 billion (17.6 percent of exports) for the first time since 2010.

Note that international tourism is compared against selected primary exports.

Table 3

International tourism expenditure compared with selected primary exports⁽¹⁾
Year ended March 1999–2016

Year ended March	Selected export					
	International tourism	Dairy products, including casein	Meat and meat products	Wood and wood products	Fruit	Crude oil
	\$(million)					
1999	5,999	4,703	2,843	2,348	909	347
2000	7,122	4,460	3,198	2,950	1,059	442
2001	8,169	6,167	3,854	3,635	1,074	669
2002	8,989	7,491	4,414	3,536	1,051	609
2003	9,494	5,919	4,242	3,653	1,054	467
2004	9,603 R	5,707	4,232	3,076	1,047	320
2005	9,987 R	5,678	4,688	3,203	1,356	378
2006	10,065 R	5,884	4,411	3,116	1,181	495
2007	10,597 R	7,332	4,813	3,497	1,191	404
2008	10,943 R	9,277	4,416	3,406	1,298	1,840
2009	10,857 R	9,975	5,432	3,472	1,497	2,450
2010	10,245 R	8,972	4,997	3,605	1,586	1,996
2011	10,025 R	11,576	5,199	4,413 R	1,446	1,976
2012	10,094 R	12,704	5,389	4,327 R	1,583	2,101
2013	9,898 R	12,349	5,279	4,385 R	1,568	1,766
2014	10,345 R	15,896	5,492	5,154	1,548	1,364
2015	12,114 R	14,168	6,194	4,632	1,758	1,198
2016P	14,486	12,346	6,580	4,855	2,362	653

1. Exports are valued fob (free on board – the value of goods at New Zealand ports before export) and include re-exports.

Symbols:

P provisional

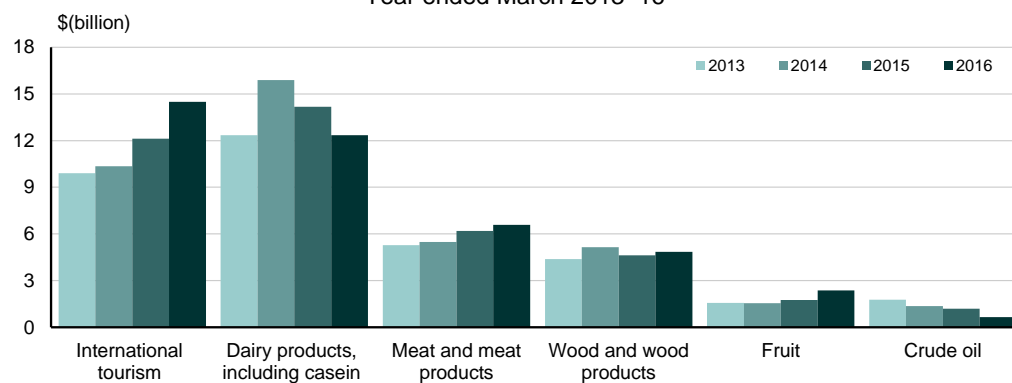
R revised

Source: Statistics New Zealand

Figure 4

International tourism expenditure compared with selected primary exports⁽¹⁾

Year ended March 2013–16



1. Exports are valued fob (free on board – the value of goods at New Zealand ports before export) and include re-exports.

Source: Statistics New Zealand

International student expenditure – studying less than 12 months

Included in international tourism expenditure is the component of international students studying in New Zealand for less than 12 months (consistent with the definition of a tourist). Expenditure by international students studying for less than 12 months comprises course fees, living costs, and airfares on resident airlines.

In the year ended March 2016, expenditure was \$2.7 billion, an increase of 8.6 percent (see table 4 and figure 5). The number of short-term arrivals for education purposes (studying for less than 12 months) increased 7.0 percent (see table 6).

Note that the calculation of international students' expenditure studying less than 12 months differs from that of education exports derived by Balance of Payments, reflecting conceptual differences.

Table 4

International student expenditure – studying less than 12 months

Year ended March 1999–2016

Year ended March	International student expenditure – studying less than 12 months		International tourism expenditure	
	\$(million)	Annual percentage change	\$(million)	Annual percentage change
1999	294	...	5,999	...
2000	326	10.9	7,122	18.7
2001	451	38.3	8,169	14.7
2002	796	76.5	8,989	10.0
2003	1,153	44.8	9,494	5.6
2004	1,564 R	35.6 R	9,603 R	1.1 R
2005	1,769 R	13.1 R	9,987 R	4.0 R
2006	1,807 R	2.1 R	10,065 R	0.8 R
2007	1,793 R	-0.8 R	10,597 R	5.3 R
2008	1,847 R	3.0 R	10,943 R	3.3 R
2009	1,860 R	0.7 R	10,857 R	-0.8 R
2010	1,986 R	6.8 R	10,245 R	-5.6 R
2011	2,044 R	2.9 R	10,025 R	-2.1 R
2012	2,042 R	-0.1 R	10,094 R	0.7 R
2013	2,047 R	0.2 R	9,898 R	-1.9 R
2014	2,214 R	8.2 R	10,345 R	4.5 R
2015	2,530 R	14.3 R	12,114 R	17.1 R
2016P	2,747	8.6	14,486	19.6

Symbols:

P provisional

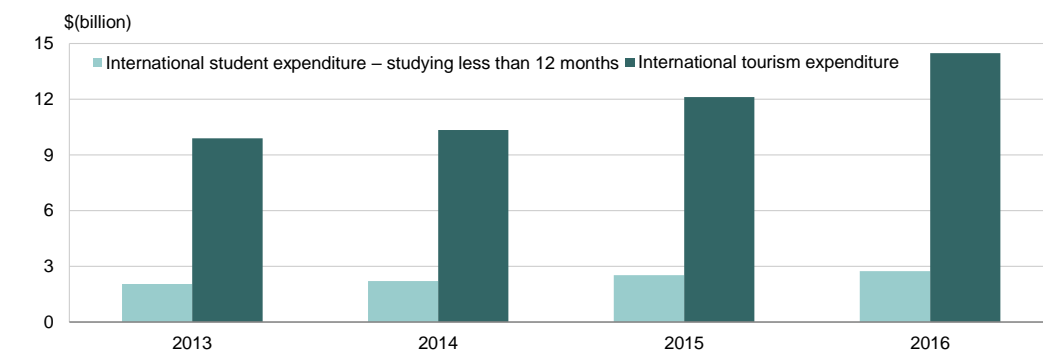
R revised

... not applicable

Source: Statistics New Zealand

Figure 5

**International student expenditure – studying less than 12 months and
international tourism expenditure**
Year ended March 2013–16



Source: Statistics New Zealand

Employment

In the year ended March 2016, tourism directly employed 188,136 people (see table 5 and figure 6).

Tourism activity directly generated 7.5 percent of total employment in New Zealand (see table 5). This compares with tourism generating 5.6 percent of direct value added to GDP (see table 1). The fact that tourism contributes more to total employment than it does to direct value added reflects a higher level of labour intensity in tourism industries.

Table 5

Tourism employment⁽¹⁾⁽²⁾

Year ended March 2000–16

Year ended March	Number of people			Number of people employed in tourism as a percentage of the total number of people employed		
	Directly employed in tourism	Indirectly employed in tourism	Total tourism employment	Directly employed in tourism	Indirectly employed in tourism	Total tourism employment
				Percent		
2000	149,973	174,543	324,516	8.1	9.4	17.5
2001	154,938	169,194	324,132	8.1	8.9	17.0
2002	159,594	160,653	320,247	8.2	8.2	16.4
2003	167,652	160,119	327,771	8.3	7.9	16.3
2004	175,926	151,962	327,888	8.4	7.3	15.7
2005	183,276	146,679	329,955	8.5	6.8	15.2
2006	190,143	147,246	337,389	8.5	6.6	15.1
2007	196,950	146,322	343,272	8.6	6.4	15.0
2008	197,619	147,135	344,754	8.4	6.3	14.7
2009	197,490	145,836	343,326	8.4	6.2	14.7
2010	187,167	137,049	324,216	8.2	6.0	14.3
2011	181,713	133,326	315,039	8.0	5.8	13.8
2012	176,883	128,508	305,391	7.7	5.6	13.2
2013	174,477	126,930	301,407	7.5	5.5	12.9
2014	175,284	133,926	309,210	7.4	5.6	13.0
2015	181,500	138,870	320,370	7.4	5.7	13.0
2016P	188,136	144,186	332,322	7.5	5.7	13.2

1. Data is only available from 2000. For more details refer to appendix 2.

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

Note:

Figures for all years prior to 2016 have been revised.

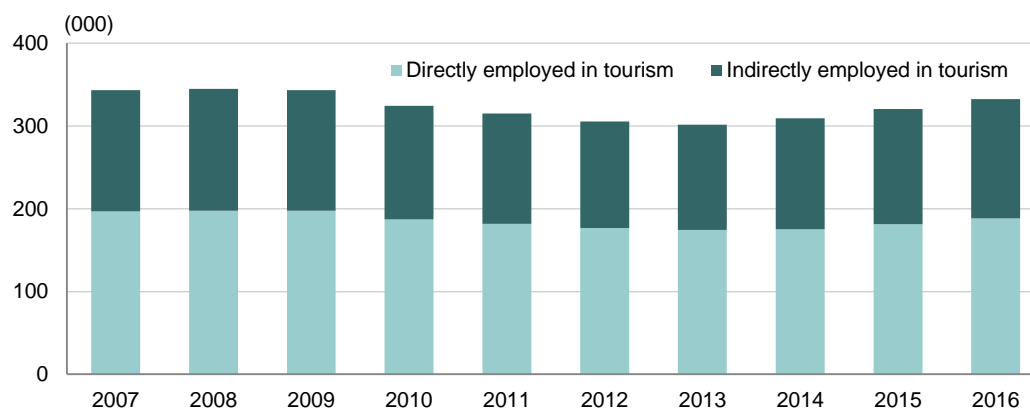
Symbol:

P provisional

Source: Statistics New Zealand

Figure 6**Number of people employed in tourism**

Year ended March 2007–16



Source: Statistics New Zealand

Overseas visitor arrivals

Table 6 presents the breakdown of international visitors by region of last permanent residence and by purpose of visit for the years ended March 2013–16 (see figure 7).

Table 6

Overseas visitor arrivals⁽¹⁾⁽²⁾

Year ended March 2013–16

	Year ended March						
	2013	2014	2015	2016	2014	2015	2016
	Number				Annual percentage change		
By region of last permanent residence							
Oceania	1,311,872	1,359,120	1,415,888	1,514,080	3.6	4.2	6.9
Asia	528,624	575,200	681,568	814,640	8.8	18.5	19.5
Europe	405,856	429,296	451,296	487,216	5.8	5.1	8.0
Americas	264,576	285,664	307,024	348,192	8.0	7.5	13.4
Other ⁽³⁾	88,880	98,048	88,624	89,472	10.3	-9.6	1.0
Total ⁽⁴⁾	2,611,377	2,752,257	2,947,901	3,255,463	5.4	7.1	10.4
By purpose of visit							
Holiday	1,204,080	1,303,776	1,432,736	1,652,560	8.3	9.9	15.3
Visiting friends & relatives	859,744	876,768	920,256	980,832	2.0	5.0	6.6
Conferences & conventions	54,160	57,888	57,440	61,536	6.9	-0.8	7.1
Business	250,752	262,672	266,000	276,752	4.8	1.3	4.0
Education	50,640	53,248	58,416	62,496	5.2	9.7	7.0
Other ⁽⁵⁾	180,432	192,976	209,552	219,424	7.0	8.6	4.7

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

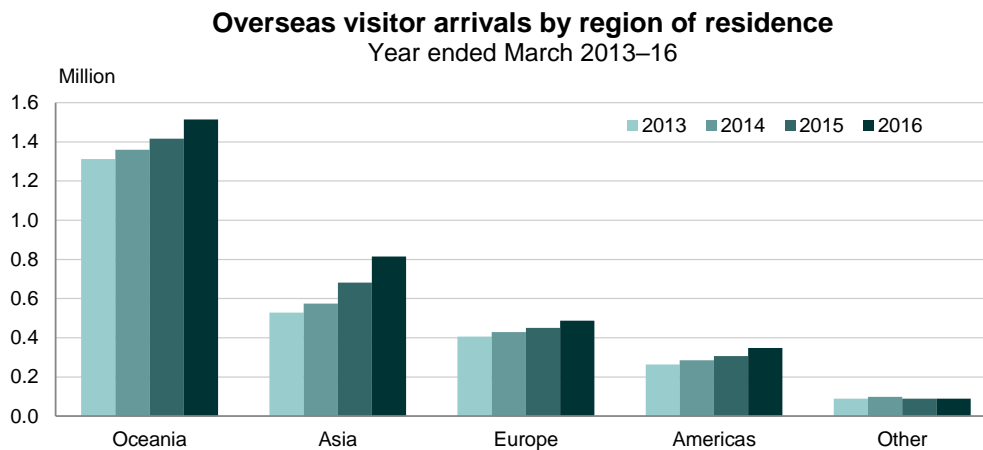
2. Individual figures may not sum to stated totals due to rounding.

3. Includes not stated.

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

5. Includes unspecified.

Source: Statistics New Zealand

Figure 7

Source: Statistics New Zealand

The number of international visitors increased 10.4 percent (307,562), following an increase of 7.1 percent in the previous year. Visitor numbers from Asia and the Americas experienced the strongest increases, for the second consecutive year.

The number of visitors from Asia increased 19.5 percent (133,072), following an 18.5 percent increase the previous year. Visitor numbers from the Americas increased 13.4 percent (41,168), and visitor numbers from Europe increased 8.0 percent (35,920).

By purpose of visit, short-term visitor arrivals to New Zealand increased for the following categories:

- holiday – up 15.3 percent (219,824 arrivals)
- visiting friends and relatives – up 6.6 percent (60,576)
- conference and conventions – up 7.1 percent (4,096)
- business – up 4.0 percent (10,752)
- education – up 7.0 percent (4,080).

Table 7 presents the breakdown of international visitors by selected country of last permanent residence for the years ended March 2013–16 (see figure 8).

Table 7

Selected overseas visitor arrivals⁽¹⁾⁽²⁾

Year ended March 2013–16

	Year ended March						
	2013	2014	2015	2016	2014	2015	2016
	Number				Annual percentage change		
By country of last permanent residence							
Australia	1,170,736	1,221,152	1,273,152	1,364,736	4.3	4.3	7.2
China, People's Republic of	210,240	239,712	295,552	377,840	14.0	23.3	27.8
United States of America	188,032	207,664	226,960	253,792	10.4	9.3	11.8
United Kingdom	189,472	191,872	199,760	213,792	1.3	4.1	7.0
Japan	75,472	73,344	83,392	91,344	-2.8	13.7	9.5
Germany	64,800	74,224	81,152	90,496	14.5	9.3	11.5

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

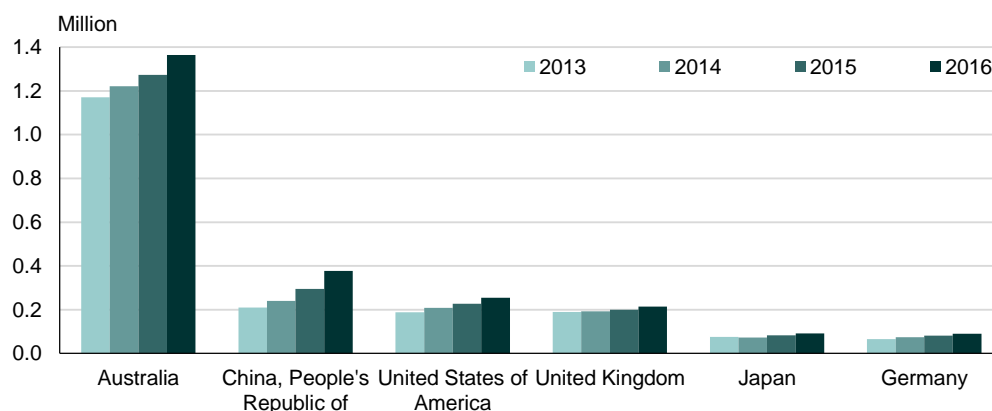
2. These totals are derived from sample counts.

Source: Statistics New Zealand

Figure 8

Selected overseas visitor arrivals by country of residence

Year ended March 2013–16



Source: Statistics New Zealand

By country of last permanent residence, the majority of short-term visitor arrivals to New Zealand originated from these selected markets:

- Australia – up 7.2 percent (91,584 arrivals)
- China – up 27.8 percent (82,288)
- United States of America – up 11.8 percent (26,832)
- United Kingdom – up 7.0 percent (14,032)
- Japan – up 9.5 percent (7,952)
- Germany – up 11.5 percent (9,344).

In the context of the TSA, the term ‘tourist’ includes travellers who might not usually be associated with the term. For instance, in addition to holiday and leisure travel, it covers other visitor activities, such as conducting business, attending meetings and conferences, and arriving for short-term education. Domestic costs incurred by New Zealanders travelling overseas (such as resident travel agency commissions) are included in domestic travel expenditure, as well as off-trip purchases of tourism-specific consumer durable goods (such as outdoor items and equipment).

Table 8 presents the breakdown of guest nights, sourced from the Accommodation Survey, for the years ended March 2013–16 (see figure 9).

In the year ended March 2016, 37.2 million guest nights were spent in short-term commercial accommodation, a 5.7 percent increase compared with the year ended March 2015. This follows an increase of 6.3 percent in the year ended March 2015 and an increase of 4.2 percent in the year ended March 2014. The percentage increase in international guest nights has exceeded that of domestic for the last three years.

Table 8
Guest nights⁽¹⁾
Year ended March 2013–16

Year ended March	International guest nights		Domestic guest nights		Total guest nights	
	Number (000)	Annual percentage change	Number (000)	Annual percentage change	Number (000)	Annual percentage change
2013	12,441	...	19,364	...	31,806	...
2014	13,328	7.1	19,799	2.2	33,127	4.2
2015	14,195	6.5	21,022	6.2	35,217	6.3
2016	15,265	7.5	21,963	4.5	37,229	5.7

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

Symbol:

... not applicable

Source: Statistics New Zealand

Figure 9



Source: Statistics New Zealand

Key events that influenced tourism for years ended March 2013–16

The following is a summary of key events that influenced the tourism industry in New Zealand in the March years 2013–16:

- Significant changes to flights in the year ended March 2016 included:
 - China Eastern Airlines launched year-round flights between Auckland and Shanghai.
 - AirAsia X launched flights from Kuala Lumpur via the Gold Coast to Auckland.
 - Emirates commenced a non-stop service between Dubai and Auckland, the longest non-stop scheduled flight in the world.
 - Air China commenced a daily service between Beijing and Auckland in partnership with Air New Zealand.
 - Philippine Airlines commenced a service from Manila via Cairns to Auckland.
 - Air New Zealand launched a direct service from Auckland to Houston.
 - China Southern Airlines commenced year-round double-daily flights from Guangzhou to Auckland.
 - Fiji Airways commenced flights between Nadi and Wellington.
 - Air New Zealand introduced new seasonal flights between Perth and Auckland over the summer–autumn period.
 - Air New Zealand launched a direct service from Auckland to Buenos Aires.
 - Air New Zealand operated a daily return service between Auckland and Vancouver over the peak northern winter period.
 - Air New Zealand, in conjunction with Virgin Australia, operated a seasonal Sunshine Coast service between Auckland and Maroochydore over the summer period.
 - Qantas operated additional services across the Tasman during early spring, primarily between Auckland and Sydney.
 - Qantas launched a seasonal Wellington to Brisbane service over the summer holiday period.
 - China Southern Airlines began direct flights between Guangzhou and Christchurch.
 - China Airlines expanded its summer service from Taipei via Sydney to Christchurch.
 - China Airlines launched a service from Taipei via Melbourne to Christchurch for the summer period.
 - Singapore Airlines operated additional flights from Singapore to Christchurch over the New Zealand summer period.
 - Qantas operated additional flights between Christchurch and Brisbane, and Christchurch and Sydney.
 - Jetstar operated additional trans-Tasman services over the Christmas holiday season, along with extra summer flights to Queenstown and Christchurch from Australia.
 - Jetstar increased its services to Queenstown over the March to October period, including additional return services from Melbourne and Sydney, and a new Gold Coast service.
 - Qantas added extra seasonal services between Sydney and Queenstown and Brisbane and Queenstown.

- Air New Zealand and Virgin Australia increased winter trans-Tasman services to Queenstown.
- Jetstar launched a new regional network, with services between Auckland and Nelson; Auckland and Napier; Auckland and New Plymouth; Auckland and Palmerston North; and Wellington and Nelson.
- Jetstar commenced services between Wellington and Dunedin.
- Air New Zealand increased its total domestic capacity by approximately 650,000 seats, including:
 - around 180,000 more seats between Christchurch and Auckland
 - 110,000 more seats between Queenstown and Auckland
 - 135,000 more seats between Auckland and Wellington
 - 20,000 new seats between Christchurch and Queenstown.
- Air New Zealand made changes to its regional network, with services no longer operating to Kaitaia, Whakatane, or Westport. Services between Whangarei and Wellington; Taupo and Wellington; Palmerston North and Nelson; and Hamilton and Auckland also ceased.
- Air Chathams commenced twice-daily flights between Whakatane and Auckland.
- Barrier Air (previously Great Barrier Airlines) began services between Kaitaia and Auckland.
- Sounds Air commenced services between Westport and Wellington; Taupo and Wellington; and Napier and Blenheim.
- Tourism New Zealand launched the latest evolution of its 100% Pure New Zealand campaign across international tourism markets.
- Cruise liner and cruise passenger visits grew strongly in the March 2013–16 years.
- The Easter public holidays occurred twice in the year ended March 2016, once in the year ended March 2015, did not occur during the year ended March 2014, and occurred twice in the year ended March 2013.
- More than 50 films and telefeatures were filmed completely, or in part, in New Zealand between the March years of 2013 and 2016.
- New Zealand jointly hosted the 2015 Cricket World Cup in the March 2015 year, though we cannot separately identify this event's effect on expenditure.
- New Zealand hosted a royal tour by The Duke and Duchess of Cambridge in the March 2015 year.
- Air New Zealand acquired additional stakes in Virgin Australia in the March 2014 and March 2015 years.
- Significant changes to flights in the year ended March 2015 included:
 - Air New Zealand and Singapore Airlines entered into an alliance, with increased flights between New Zealand and Singapore from January 2015.
 - China Eastern Airlines commenced direct flights between Shanghai and Auckland for the period December 2014 to March 2015.
 - Air New Zealand and Virgin Australia increased trans-Tasman services to Queenstown and Christchurch for the November to March season.
 - Singapore Airlines increased the number of flights to Christchurch during the summer holiday season.
 - Air New Zealand took delivery of its first 787-9 Dreamliner, which commenced Auckland–Perth services in December 2014.

- Qantas commenced a seasonal service from Auckland to Perth in December 2014.
- China Southern Airlines increased flights between Guangzhou and Auckland for the October to March 2015 period.
- China Airlines commenced seasonal flights between Christchurch–Sydney–Taipei during the period December 2014 to March 2015.
- China Airlines increased flights in its Taipei–Brisbane–Auckland route during the peak New Zealand summer period.
- Jetstar commenced services between Wellington and Gold Coast, and Wellington and Melbourne.
- The third film of the Hobbit trilogy was released in the March 2015 year. The second film of the Hobbit trilogy was released in the March 2014 year, and the world premiere of the first Hobbit film took place in New Zealand in the March 2013 year.
- The framework Tourism 2025 – Growing Value Together Whakatipu Uara Ngatahi was launched in March 2014. Its goal is annual tourism expenditure of \$41 billion by 2025.
- Significant changes to flights in the year ended March 2014 included:
 - Emirates started flying a third A380 to Auckland, servicing its Dubai–Brisbane–Auckland route.
 - China Southern Airlines started flying Boeing Dreamliners on its Guangzhou–Auckland route. It provided two additional return flights to Auckland and one to Christchurch during the 2014 Chinese New Year (February) celebrations. It increased its Guangzhou–Auckland service from seven to 10 weekly flights.
 - Air New Zealand reduced its Auckland–Osaka service from year-round to seasonal, as did Korean Air for its Auckland–Seoul service.
 - Thai Airways reduced some of its services to Bangkok.
 - Qantas announced it would reduce its weekly services to Melbourne and Sydney.
 - Air New Zealand commenced a seasonal Perth–Christchurch service in December 2013.
 - Singapore Airlines added two flights a week to Christchurch from early December 2013 to cater for the peak summer period.
 - Jetstar, Qantas, Air New Zealand, and Virgin Australia increased the frequency and capacity of their trans-Tasman flights to Queenstown.
 - Jetstar withdrew its Wellington–Queenstown service, and made its Auckland–Christchurch service more frequent.
 - An extension of Air New Zealand's trans-Tasman alliance with Virgin Australia was granted.
- Visitors from China exceeded 200,000 for the first time in the March 2013 year.
- Significant changes to flights in the year ended March 2013 included:
 - Air New Zealand stopped services between Beijing and Auckland and increased services between Shanghai and Auckland.
 - Hawaiian Airlines began direct services between Honolulu and Auckland.
 - Jetstar acquired more aircraft and increased domestic and trans-Tasman services.
 - Qantas stopped services between Los Angeles and Auckland.

3 Tourism expenditure

The major focus of the TSA is to identify and measure tourism expenditure on goods and services produced within the New Zealand economy.

By determining tourism expenditure, tourism's direct contribution to GDP can be derived, and compared with the contribution of other industries such as agriculture or manufacturing.

Table 9 presents tourism expenditure (or direct tourism demand) by type of product.

Table 9

Tourism expenditure by type of product⁽¹⁾⁽²⁾

Year ended March 2013–16

Product	Year ended March						
	2013	2014	2015	2016P	2014	2015	2016P
	\$(million)				Annual percentage change		
Accommodation services	2,166	2,257	2,439	2,607	4.2	8.1	6.9
Food and beverage serving services	2,862	2,969	3,356	3,896	3.7	13.0	16.1
Air passenger transport	4,232	4,347	4,736	5,200	2.7	8.9	9.8
Other passenger transport	3,114	3,351	3,626	3,985	7.6	8.2	9.9
Imputed rental on holiday homes	699	719	739	776	2.9	2.8	5.0
Cultural, recreation, and gambling services	815	869	995	1,145	6.6	14.5	15.1
Retail sales – alcohol, food, and beverages	1,840	1,911	2,119	2,410	3.9	10.9	13.7
Retail sales – fuel and other automotive products	1,921	1,943	2,076	2,256	1.1	6.8	8.7
Retail sales – other	4,812	4,991	5,625	6,469	3.7	12.7	15.0
Education services	637	670	764	871	5.2	14.0	14.0
Other tourism products	1,691	1,769	1,965	2,254	4.6	11.1	14.7
Total tourism demand excluding GST	24,788	25,797	28,441	31,869	4.1	10.2	12.1
GST paid on purchases by tourists	2,159	2,242	2,494	2,830	3.8	11.2	13.5
Total tourism expenditure	26,947	28,039	30,935	34,699	4.1	10.3	12.2

1. All product values are in producers' prices.

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

Note:

Figures for all years prior to 2016 have been revised.

Symbol:

P provisional

Source: Statistics New Zealand

Table 9 shows that for the year ended March 2016:

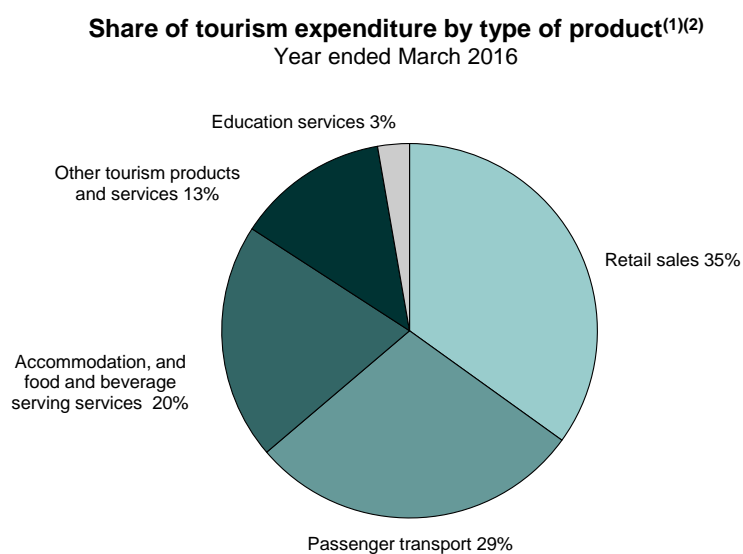
- Total tourism expenditure increased 12.2 percent, following increases of 10.3 percent in 2015 and 4.1 percent in 2014.
- The strongest percentage increases in tourism expenditure were in:
 - food and beverage serving services, increasing 16.1 percent (\$540 million)

- cultural, recreation, and gambling services, increasing 15.1 percent (\$150 million)
- retail sales – other, increasing 15.0 percent (\$844 million).

Figure 10 presents the share of tourism expenditure (excluding GST).

The main products tourists purchased related to retail sales and passenger transport, contributing 34.9 percent and 28.8 percent, respectively. Tourists spent 20.4 percent of their budget on accommodation, and food and beverage serving services. They spent 13.1 percent on other tourism products and services (see figure 10).

Figure 10



1. Individual percentages may not sum to 100 due to rounding.

2. Product totals exclude GST.

Source: Statistics New Zealand

Table 10 presents tourism expenditure by type of product and by type of tourist for the years ended March 2013–16. The tourism product ratio is the proportion of total supply (national production plus imports) of each product that tourists purchase.

Table 10**Tourism expenditure⁽¹⁾⁽²⁾**

By type of product and type of tourist

Year ended March 2013–16

Product	Domestic demand		International demand	Total demand	Total supply	Tourism product ratio
	Business and government demand	Household demand				
	\$(million)					
2013						
Accommodation services	545	489	1,132	2,166	2,264	0.96
Food and beverage serving services	342	1,131	1,388	2,862	7,100	0.40
Air passenger transport	1,042	1,189	2,001	4,232	4,340	0.98
Other passenger transport	1,206	1,097	812	3,114	4,460	0.70
Imputed rental on holiday homes	0	699	0	699	699	1.00
Cultural, recreation, and gambling services	0	520	295	815	3,710	0.22
Retail sales – alcohol, food, and beverages	0	1,550	290	1,840	52,959	0.03
Retail sales – fuel and other automotive products	796	523	602	1,921	12,482	0.15
Retail sales – other	0	3,220	1,592	4,812	41,083	0.12
Education services	0	208	430	637	4,850	0.13
Other tourism products	212	870	609	1,691	39,780	0.04
Total tourism demand excluding GST	4,143	11,496	9,149	24,788	...	...
GST paid on purchases by tourists	5	1,404	749	2,159	...	...
Total tourism expenditure	4,148	12,901	9,898	26,947	...	...
2014						
Accommodation services	561	494	1,202	2,257	2,336	0.97
Food and beverage serving services	364	1,138	1,467	2,969	7,483	0.40
Air passenger transport	1,092	1,256	1,999	4,347	4,457	0.98
Other passenger transport	1,354	1,151	846	3,351	4,792	0.70
Imputed rental on holiday homes	0	719	0	719	719	1.00
Cultural, recreation, and gambling services	0	557	311	869	3,802	0.23
Retail sales – alcohol, food, and beverages	0	1,604	306	1,911	58,393	0.03
Retail sales – fuel and other automotive products	774	529	640	1,943	12,066	0.16
Retail sales – other	0	3,319	1,672	4,991	43,266	0.12
Education services	0	202	468	670	4,990	0.13
Other tourism products	230	903	636	1,769	41,727	0.04
Total tourism demand excluding GST	4,375	11,873	9,549	25,797	...	...
GST paid on purchases by tourists	6	1,439	797	2,242	...	...
Total tourism expenditure	4,381	13,312	10,345	28,039	...	...

For footnotes, see end of table.

Table continues next page

Table 10 continued

Product	Domestic demand		International demand	Total demand	Total supply	Tourism product ratio
	Business and government demand	Household demand				
	\$(million)					
2015						
Accommodation services	589	528	1,321	2,439	2,463	0.99
Food and beverage serving services	378	1,229	1,749	3,356	8,256	0.41
Air passenger transport	1,253	1,349	2,133	4,736	4,849	0.98
Other passenger transport	1,404	1,226	996	3,626	5,172	0.70
Imputed rental on holiday homes	0	739	0	739	739	1.00
Cultural, recreation, and gambling services	0	600	395	995	3,951	0.25
Retail sales – alcohol, food, and beverages	0	1,703	416	2,119	56,242	0.04
Retail sales – fuel and other automotive products	770	556	751	2,076	11,125	0.19
Retail sales – other	0	3,522	2,103	5,625	44,939	0.13
Education services	0	234	530	764	5,304	0.14
Other tourism products	237	958	770	1,965	43,987	0.04
Total tourism demand excluding GST	4,631	12,646	11,164	28,441	...	...
GST paid on purchases by tourists	6	1,539	950	2,494	...	...
Total tourism expenditure	4,637	14,184	12,114	30,935	...	...
2016P						
Accommodation services	605	545	1,457	2,607	2,621	0.99
Food and beverage serving services	392	1,400	2,104	3,896	8,811	0.44
Air passenger transport	1,390	1,435	2,374	5,200	5,243	0.99
Other passenger transport	1,458	1,341	1,186	3,985	5,701	0.70
Imputed rental on holiday homes	0	776	0	776	776	1.00
Cultural, recreation, and gambling services	0	645	500	1,145	4,004	0.29
Retail sales – alcohol, food, and beverages	0	1,837	573	2,410	57,781	0.04
Retail sales – fuel and other automotive products	758	597	900	2,256	11,944	0.19
Retail sales – other	0	3,794	2,675	6,469	46,894	0.14
Education services	0	273	598	871	5,447	0.16
Other tourism products	243	1,038	974	2,254	47,642	0.05
Total tourism demand excluding GST	4,846	13,681	13,342	31,869	...	...
GST paid on purchases by tourists	6	1,680	1,144	2,830	...	...
Total tourism expenditure	4,852	15,361	14,486	34,699	...	...

1. All product values are in producers' prices.

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

Note:

Figures for all years prior to 2016 have been revised.

Symbols:

P provisional

... not applicable

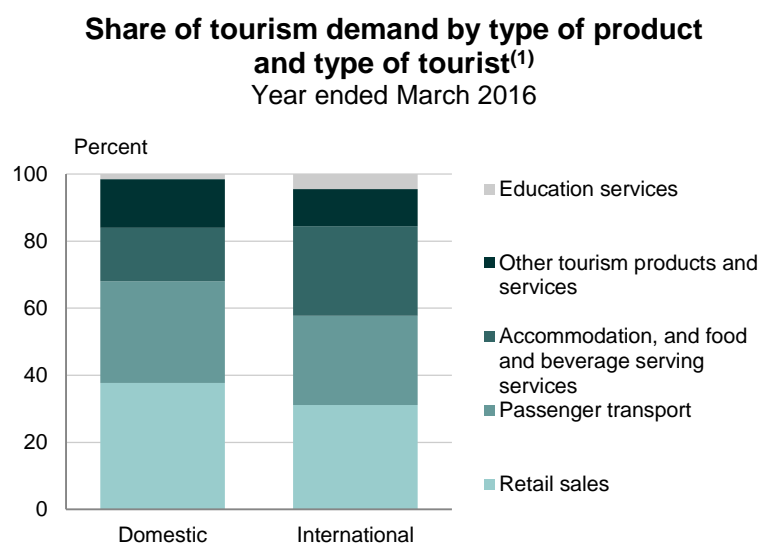
Source: Statistics New Zealand

Table 10 shows that for the year ended March 2016:

- Total household tourism expenditure increased 8.3 percent, following an increase of 6.6 percent the previous year.
- The increase in household tourism expenditure was strongest in 'retail sales – other', up \$272 million. Food and beverage serving services increased \$171 million from the previous year with 'retail sales – alcohol, food and beverages' increasing \$134 million.
- Between 2013 and 2016, total household tourism spending increased 19.1 percent. Over the same period, total household consumption expenditure increased 10.5 percent.
- Total spending by international tourists in New Zealand increased 19.6 percent, following an increase of 17.1 percent in the March 2015 year and an increase of 4.5 percent in the March 2014 year.
- The increase in international tourism expenditure was strongest in 'retail sales – other', up \$572 million. Food and beverage serving services increased \$355 million from the previous year, and air passenger transport increased \$241 million.

Figure 11 presents the share of tourism demand (excluding GST).

Figure 11



1. Product totals exclude GST.

Source: Statistics New Zealand

As figure 11 shows, the biggest share of domestic demand was retail sales, at 37.7 percent, while international tourism's demand of retail represented only 31.1 percent of international spending. International tourists spent the remainder of their budget primarily on passenger transport (26.7 percent) and accommodation, food, and beverage serving services (26.7 percent).



4 Tourism supply

The tourism supply of an industry is derived by summing the value of tourism products sold by that industry. The value of tourism product sales is derived by multiplying the total supply (national production plus imports) by its corresponding tourism product ratio.

In the absence of supply and use tables for the years ended March 2014–16, we derived an initial value of supply by product by industry for the same period from a variety of sources (covered in detail in appendix 2 ‘Methodology’). In table 11, supply by product is shown only for tourism-characteristic industries (refer appendix 1 ‘Conceptual framework’).

Total supply and tourism supply by product are shown in table 11 for the years ended March 2013–16.

Points to note from table 11:

- Goods and services can be consumed/purchased by tourists and non-tourists. The tourism product ratio indicates the proportion of a product's supply that is purchased by tourists. In 2016, for example, the tourism product ratio for accommodation services was 0.99. This means that almost all accommodation available was purchased by tourists. In contrast, tourists purchased only 0.19 of retail supplies of fuel and other automotive products.
- Tourism supply increased 12.1 percent in the March 2016 year. From 2013 to 2016, tourism supply increased at a faster rate than total supply (28.6 percent compared with 13.3 percent over this period).
- Imports sold directly to tourists represented 10.8 percent of total tourism supply in the March 2016 year, compared with 10.3 percent in the year ended March 2013.

Table 11

Derivation of tourism supply from total supply⁽¹⁾⁽²⁾
 Year ended March 2013–16

Product	Total supply				Tourism product ratio	Tourism supply			
	Tourism-characteristic industries	All other industries	Imports	Total		Tourism-characteristic industries	All other industries	Imports sold directly to tourists by retailers	Total
	\$(million)					\$(million)			
2013									
Accommodation services	1,829	435	0	2,264	0.96	1,749	416	0	2,166
Food and beverage serving services	6,237	863	0	7,100	0.40	2,528	334	0	2,862
Air passenger transport	4,288	52	0	4,340	0.98	4,182	50	0	4,232
Other passenger transport	4,096	363	0	4,460	0.70	2,866	248	0	3,114
Imputed rental on holiday homes	0	699	0	699	1.00	0	699	0	699
Cultural, recreation, and gambling services	3,521	189	0	3,710	0.22	751	64	0	815
Retail sales – alcohol, food, and beverages	948	46,922	5,090	52,959	0.03	200	1,422	218	1,840
Retail sales – fuel and other automotive products	0	8,707	3,776	12,482	0.15	0	1,414	507	1,921
Retail sales – other	164	24,572	16,347	41,083	0.12	34	2,944	1,834	4,812
Education services	13	4,837	0	4,850	0.13	2	635	0	637
Other tourism products	456	39,325	0	39,780	0.04	40	1,650	0	1,691
Total supply of products	21,551	126,964	25,212	173,727	...				
Total tourism supply of products						12,352	9,877	2,559	24,788
2014									
Accommodation services	1,889	447	0	2,336	0.97	1,825	432	0	2,257
Food and beverage serving services	6,526	957	0	7,483	0.40	2,608	362	0	2,969
Air passenger transport	4,405	51	0	4,457	0.98	4,297	50	0	4,347
Other passenger transport	4,467	325	0	4,792	0.70	3,139	212	0	3,351
Imputed rental on holiday homes	0	719	0	719	1.00	0	719	0	719
Cultural, recreation, and gambling services	3,595	207	0	3,802	0.23	797	72	0	869
Retail sales – alcohol, food, and beverages	1,212	51,827	5,354	58,393	0.03	216	1,456	239	1,911
Retail sales – fuel and other automotive products	3	8,157	3,906	12,066	0.16	1	1,381	561	1,943
Retail sales – other	175	25,612	17,479	43,266	0.12	35	3,044	1,913	4,991
Education services	14	4,976	0	4,990	0.13	2	668	0	670
Other tourism products	313	41,414	0	41,727	0.04	26	1,743	0	1,769
Total supply of products	22,598	134,692	26,739	184,029	...				
Total tourism supply of products						12,945	10,140	2,713	25,799

For footnotes, see end of table.

Table continues next page

Table 11 continued

Product	Total supply				Tourism product ratio	Tourism supply			
	Tourism-characteristic industries	All other industries	Imports	Total		Tourism-characteristic industries	All other industries	Imports sold directly to tourists by retailers	Total
	\$(million)					\$(million)			
2015									
Accommodation services	1,995	468	0	2,463	0.99	1,975	463	0	2,439
Food and beverage serving services	7,213	1,043	0	8,256	0.41	2,953	404	0	3,356
Air passenger transport	4,791	58	0	4,849	0.98	4,679	56	0	4,736
Other passenger transport	4,805	367	0	5,172	0.70	3,390	236	0	3,626
Imputed rental on holiday homes	0	739	0	739	1.00	0	739	0	739
Cultural, recreation, and gambling services	3,723	228	0	3,951	0.25	912	83	0	995
Retail sales – alcohol, food, and beverages	1,335	49,553	5,354	56,242	0.04	236	1,610	273	2,119
Retail sales – fuel and other automotive products	3	7,215	3,906	11,125	0.19	1	1,424	652	2,076
Retail sales – other	189	27,271	17,479	44,939	0.13	38	3,455	2,131	5,625
Education services	13	5,291	0	5,304	0.14	2	762	0	764
Other tourism products	324	43,662	0	43,987	0.04	28	1,937	0	1,965
Total supply of products	24,392	135,895	26,739	187,026	...				
Total tourism supply of products						14,214	11,171	3,056	28,441
2016P									
Accommodation services	2,149	472	0	2,621	0.99	2,138	469	0	2,607
Food and beverage serving services	7,713	1,098	0	8,811	0.44	3,434	462	0	3,896
Air passenger transport	5,183	59	0	5,243	0.99	5,141	59	0	5,200
Other passenger transport	5,304	397	0	5,701	0.70	3,737	248	0	3,985
Imputed rental on holiday homes	0	776	0	776	1.00	0	776	0	776
Cultural, recreation, and gambling services	3,761	243	0	4,004	0.29	1,045	100	0	1,145
Retail sales – alcohol, food, and beverages	1,436	50,783	5,563	57,781	0.04	268	1,828	314	2,410
Retail sales – fuel and other automotive products	3	7,882	4,059	11,944	0.19	1	1,578	677	2,256
Retail sales – other	221	28,511	18,161	46,894	0.14	39	3,965	2,465	6,469
Education services	16	5,431	0	5,447	0.16	3	868	0	871
Other tourism products	343	47,299	0	47,642	0.05	34	2,221	0	2,254
Total supply of products	26,129	142,951	27,783	196,863	...				
Total tourism supply of products						15,840	12,572	3,457	31,869

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

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

Note:

Figures for all years prior to 2016 have been revised.

Symbols:

P provisional

... not applicable

Source: Statistics New Zealand

5 Tourism value added

Direct tourism value added

Direct tourism value added calculations are usually made at a finer level of industry detail than is presented in table 12. For reasons of confidentiality and practicality, we show only the working level of calculations in this report.

We calculate the tourism industry ratio 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.

We multiply tourism industry ratios through each production account for all industries to produce direct tourism value added. This is summarised and presented in table 12 for the years ended March 2013–16.

Table 12

Direct tourism value added⁽¹⁾

Year ended March 2013–16

	Year ended March						
	2013	2014	2015	2016P ⁽²⁾	2014	2015	2016P
	\$(million)				Annual percentage change		
Published GDP	217,995	232,473	241,187	248,675	6.6	3.7	3.1
Less GST, import duties, and other taxes on production	18,512	19,252	20,077	20,701	4.0	4.3	3.1
Gives contribution to GDP from production	199,483	213,221	221,110	227,975	6.9	3.7	3.1
Tourism output of tourism-characteristic industries	12,352	12,945	14,214	15,840	4.8	9.8	11.4
Less tourism intermediate consumption of tourism-characteristic industries	7,011	7,285	8,427	9,382	3.9	15.7	11.3
Gives direct tourism value added of tourism-characteristic industries	5,342	5,659	5,786	6,456	5.9	2.2	11.6
Plus direct tourism value added of all other industries	5,001	5,207	5,723	6,416	4.1	9.9	12.1
Gives total direct tourism value added	10,343	10,868	11,508	12,873	5.1	5.9	11.9
Percent							
Direct tourism value added as a percentage of total industry contribution to GDP	5.2	5.1	5.2	5.6	...	...	...

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

2. Due to the GDP from production and its components for 2016P being unavailable at the time of publication, GDP expenditure has been used.

Note:

Figures for all years prior to 2016 have been revised.

Symbols:

P provisional

... not applicable

Source: Statistics New Zealand

Point to note from table 12:

- Between 2013 and 2016, direct tourism value added (also referred to as tourism's direct contribution to GDP) increased 24.5 percent, a faster rate than the contribution to GDP from domestic production, which increased 14.3 percent.

As shown in figure 1, total expenditure on goods and services by tourists (\$34.7 billion in 2016) consists of three components:

- Goods and services worth \$28.4 billion produced in New Zealand and directly purchased by tourists. Direct tourism output consisted of \$3.0 billion of intermediate inputs, and \$12.9 billion of direct tourism value added.
- Imports of \$3.5 billion sold directly to tourists by retailers.
- GST of \$2.8 billion paid on goods and services purchased by tourists.

Domestically produced goods are sold directly to tourists by retailers, and only the retail margin (production value of the turnover of the retailer) of these sold goods is recorded in the direct tourism value added. The value added in the production of these goods is not part of tourism direct gross value added, but is to be considered within the indirect effects.

Indirect tourism value added and imports

As well as measuring direct tourism value added, *Tourism Satellite Account: 2016* reports on indirect tourism value added (or tourism's indirect contribution to GDP). This 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.

Measuring indirect tourism value added involves tracing the flow-on effects of businesses' intermediate purchases that are used directly in producing tourism products (see figure 1) and measuring the cumulative value added these purchases generate.

For example, the intermediate purchases of the 'accommodation' and 'food and beverage services' industries include items such as electricity, bedding, and food purchased from other industries or imports. In turn, these other industries will have made intermediate purchases from other industries (or from overseas) in order to produce the items they sell to the accommodation and food and beverage services industries. So the sequence continues, until all intermediate purchases can be directly accounted for, either as value added or imports.

Measuring indirect tourism's contribution to GDP involves summing the value added of each industry that is generated throughout this sequence. The New Zealand TSA covers the intermediate consumption related to direct tourist expenditure. Total tourism expenditure can be explained in terms of:

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

Note that some of tourism's indirect demand for intermediate inputs will not be met by the output of New Zealand producers, but by imports that provide no direct contribution to New Zealand's GDP. For more information, refer to *Quarterly gross domestic product: Sources and methods (fourth edition)* (2014).

Table 13 summarises the relationship between the various components of tourism expenditure.

Table 13

Tourism expenditure by component⁽¹⁾

Year ended March 2013–16

	Year ended March						
	2013	2014	2015	2016P	2014	2015	2016P
	\$(million)				Annual percentage change		
Direct tourism value added	10,343	10,868	11,508	12,873	5.1	5.9	11.9
Indirect tourism value added	7,908	8,290	8,749	9,815	4.8	5.5	12.2
Imports sold to tourists ⁽²⁾	6,537	6,639	8,184	9,181	1.6	23.3	12.2
GST paid on purchases by tourists	2,159	2,242	2,494	2,830	3.8	11.2	13.5
Total tourism expenditure	26,947	28,039	30,935	34,699	4.1	10.3	12.2

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

2. Imports used in production of goods and services sold to tourists; imports sold directly to tourists by retailers.

Note:

Figures for all years prior to 2016 have been revised.

Symbol:

P provisional

Source: Statistics New Zealand

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.

Changing industry composition flows through into other economic aggregates. This can lead to a result where the different industries that contribute to tourism have varying value added to output ratios.

Movements in the value of imports sold directly to tourists and in imports used in the production of goods and services sold to tourists are strongly influenced by exchange rate variations and changes in the mix of products purchased. Table 13 shows that in the year ended March 2016 these imports rose 12.2 percent, and direct tourism value added rose 11.9 percent.

Tourism expenditure can also be presented by the share of each component, as shown in table 14 for the years ended March 2013–16.

Table 14**Share of tourism expenditure by component⁽¹⁾**

Year ended March 2013–16

	Year ended March			
	2013	2014	2015	2016P
	Percent			
Direct tourism value added	38.4	38.8	37.2	37.1
Indirect tourism value added	29.3	29.6	28.3	28.3
Imports sold to tourists ⁽²⁾	24.3	23.7	26.5	26.5
GST paid on purchases by tourists	8.0	8.0	8.1	8.2
Total tourism expenditure	100.0	100.0	100.0	100.0

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

2. Imports used in production of goods and services sold to tourists; imports sold directly to tourists by retailers.

Note:

Figures for all years prior to 2016 have been revised.

Symbol:

P provisional

Source: Statistics New Zealand



6 Tourism employment

Direct tourism employment adds another dimension to measuring the role of tourism in the New Zealand economy, focusing on tourism's impact on employment.

Table 15 shows the number of people directly employed in tourism, by employees and working proprietors.

Employment is derived from Linked Employer-Employee Data (LEED) annual statistics. The tourism satellite account uses the main earnings source, by industry measure, which allocates a person to the industry they have generated the most earnings from in a tax year.

Points to note from table 15:

- 188,136 people were directly employed in tourism in the year ended March 2016, an increase of 3.5 percent from the previous year.
- Direct tourism employment increased 7.8 percent between 2013 and 2016. The total number of people employed in New Zealand increased 8.1 percent over the same period.
- The number of people employed in tourism does not necessarily correlate with movements in total tourism expenditure or direct value added. In 2016, for example, direct tourism value added increased 11.9 percent, while the number of people employed directly in tourism increased 3.5 percent. This difference may be the result of several factors including:
 - a lag between growth in a given industry and decisions to employ new staff
 - a shift in the number of hours worked, or output for each person employed.

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

Table 15**Direct tourism employment⁽¹⁾⁽²⁾⁽³⁾**

Year ended March 2013–16

	Year ended March						
	2013	2014	2015	2016P	2014	2015	2016P
	Number				Annual percentage change		
Total employment							
Employees	1,928,682	1,976,166	2,042,124	2,098,902	2.4	3.2	2.7
Working proprietors	399,147	401,865	413,316	417,561	0.7	2.8	1.0
Number of people employed	2,327,832	2,378,028	2,455,437	2,516,466	2.1	3.2	2.4
Tourism employment							
Tourism employees	152,892	153,816	160,725	166,134	0.6	4.3	3.3
Tourism working proprietors	21,582	21,468	20,772	21,999	-0.5	-3.4	5.6
Number of people directly employed in tourism	174,477	175,284	181,500	188,136	0.5	3.4	3.5
Percent							
Number of people directly employed in tourism as a percentage of the total number of people employed	7.5	7.4	7.4	7.5	...	...	...

1. Individual figures in this table have been rounded, and discrepancies may occur between sums of components and totals.

2. Total employment numbers are sourced from Linked Employer-Employee Data.

3. Percentage calculations are from unrounded employment numbers.

Note:

Figures for all years prior to 2016 have been revised.

Symbols:

P provisional

... not applicable

Source: Statistics New Zealand

7 Tourism industry profitability

Measuring tourism industry profitability allows for more in-depth alternative analysis of the tourism sector. This measure provides time-series data on variables at an industry level, allowing comparison across time, within an existing industry, and across industries.

Table 16 and figure 12 show gross operating surplus as a percentage of total tourism output for tourism industries and for all non-tourism-related industries. It is one measure of tourism profitability, but reflects economic rather than accounting concepts. Data is presented up until the latest balanced supply and use year.

Gross operating surplus is before the deduction of interest and economic depreciation.

Table 16

Tourism gross operating surplus as a percentage of total tourism output⁽¹⁾⁽²⁾

Year ended March 2009–13

Industry	Year ended March				
	2009	2010	2011	2012	2013
	Percent				
Tourism-characteristic industries					
Accommodation	20.0	17.8	18.1	20.3	22.4
Food and beverage services	10.2	13.9	14.1	13.3	13.9
Road, rail, and water transport ⁽³⁾	13.8	16.9	16.6	13.9	14.2
Air and space transport	-4.4	4.0	6.0	10.1	11.8
Other transport, transport support, and travel and tour services	20.8	23.3	18.6	20.1	18.7
Rental and hiring services	48.0	47.7	48.5	43.7	41.2
Arts and recreation services	19.5	20.2	19.5	22.2	21.7
Total tourism-characteristic industries	12.2	16.0	15.9	17.1	17.6
Tourism-related industries					
Retail trade	17.9	19.0	19.3	20.0	20.6
Education and training	14.1	15.2	14.3	14.1	15.7
All non-tourism-related industries	20.1	20.7	21.3	21.8	22.6
Total industry	15.2	17.6	17.8	18.7	19.3

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

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

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

Note:

Figures for all years prior to 2013 have been revised.

Source: Statistics New Zealand

Points to note from table 16:

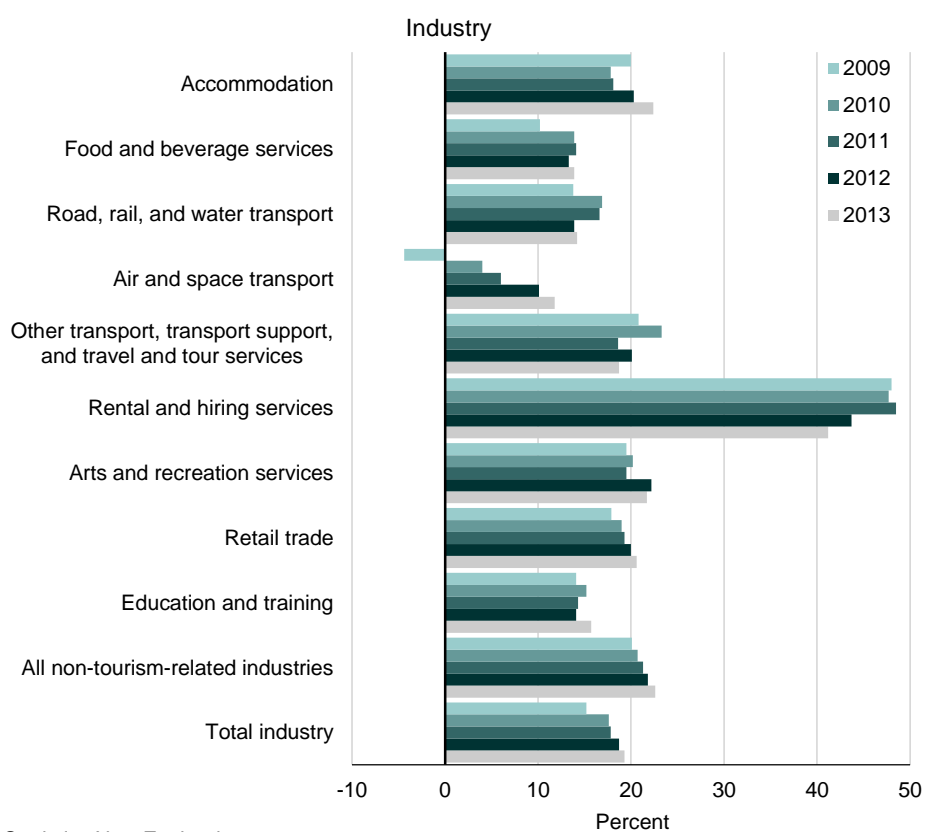
- The profitability of total tourism-characteristic industries for the year ended March 2013 increased 0.5 percentage points compared with the year ended March 2012.
- Only the tourism-characteristic industries of 'other transport, transport support, and travel and tour services', 'rental and hiring services', and 'arts and recreation services' had lower profitability ratios than in 2012.

- The only broad tourism industry categories with lower profitability ratios in the year ended March 2013 compared with the year ended March 2009 were:
 - other transport, transport support, and travel and tour services
 - rental and hiring services.

Figure 12

**Tourism gross operating surplus as a percentage of total
tourism output**

Year ended March 2009–13



Source: Statistics New Zealand

Appendix 1: Conceptual framework

Definitions

Tourism Satellite Account: 2016 is based on the methodology produced by the United Nations World Tourism Organization (UNWTO) in its publication *Tourism satellite account: Recommended methodological framework 2008*. This method is approved by the United Nations Statistical Commission and the methodological publications of the Organisation for Economic Co-operation and Development (OECD). These organisations have collaborated to produce guidelines for tourism satellite accounts (TSAs). Although the organisations may differ slightly in their recommended treatment of some conceptual issues, they generally take a similar approach that is based on the international standard *System of National Accounts 2008*. Definitions used in *Tourism Satellite Account: 2016* are based on the recommendations of the UNWTO, 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.

Not all travellers (people moving from one place to another) are tourists. To be defined as a tourist, a person must also be travelling to places outside their usual environment (defined below) for a limited time. The 12-month time limit is consistent with the guideline in *System of National Accounts 2008*, which is 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 people are not considered tourists:

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

The New Zealand TSA covers only tourists who travel to or within New Zealand. These are classified as either domestic or international tourists. The domestic tourist group is 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 but outside their usual environment. While travelling, they do not stay in any one place for more than 12 months.

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

International tourist

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

For the purposes of a TSA, international tourists are exclusively inbound travellers (non-residents travelling in New Zealand). International students studying in New Zealand for less than 12 months are included in the scope of the TSA. All their expenditure – airfares, tuition fees, and accommodation and living expenses – are included in international tourism expenditure. International students studying in New Zealand for more than 12 months are excluded from the TSA because they are considered to be residing in their usual environment within New Zealand. Such students are treated as tourists only if they travel outside their usual environment within New Zealand. However, in practice, it is difficult to estimate this expenditure, and it is therefore excluded.

Usual environment

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

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

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 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 UNWTO does not give a definitive definition. Instead, it suggests possible criteria to be used by countries to establish their own definition.

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

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

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 (eg meals or souvenirs), or is travel related (eg pre-booked airfares, luggage, or other tourism-specific durables). The trip must be taken outside the usual environment of the tourist. This expenditure includes goods and services tax (GST).

Since tourists are defined based on their relationship to their usual environment, expenditure on a product may constitute tourism expenditure, depending on who is

purchasing the product. Tourism expenditure is defined from the perspective 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.

Tourism demand

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, and the trip must be taken outside the usual environment of the tourist. In other words, tourism demand is equivalent to tourism expenditure, excluding GST.

Tourism output

Tourism output is the value of goods and services purchased by tourists, excluding imports sold directly to tourists. It is derived from tourism demand by removing the imports sold directly to tourists by retailers and comprises the following components:

- tourism intermediate consumption – the goods and services used in the process of production of products sold to tourists
- tourism value added – the 'value' a producer adds to the raw material goods and services and/or transformed goods it purchases in the process of production.

Tourism intermediate consumption

Tourism intermediate consumption consists of goods and services used in the process of producing products sold to tourists.

Travel agents' commissions, even where these are paid by transport or accommodation providers to travel agents, are not included in tourism intermediate consumption. Instead, this expenditure is included in 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 tourism demand.

Goods for resale

Goods for resale are goods acquired for the purpose of reselling and without further processing or transformation.

Valuation basis used in tourism satellite accounts

Tourism expenditure in TSAs is initially measured in purchasers' prices (market prices). Essentially, purchasers' prices are the amounts paid by tourists for products. Tourism expenditure is then converted into producers' prices and incorporated into the supply and use 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 those of other countries. This is because the New Zealand System of National Accounts (NZSNA) and the TSA measure industry value added in producers' prices, while Australia and other countries measure industry value added in basic prices, or at factor cost. Consequently, international comparisons can be slightly misleading, as industry value added estimates can have a different valuation basis. (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 direct tourism value added valuation is also measured in producers' prices.

Tourism products

The tourism product ratio

The tourism product ratio is the proportion of the total supply of a product or service that is consumed by tourists. It provides the means of classifying tourism products as 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.
- 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 up to 25 percent of its production. However, 'Retail sales – clothing and footwear', which exceeds the 25 percent of production threshold, is categorised alongside fellow tourism-related retail commodities, because the activity undertaken specifically relates to retail.
Note: a tourism-specific product is either a tourism-characteristic product or a tourism related product.
- A **non-tourism-related** product is a product that is not tourism-specific. It is assumed in the New Zealand TSA that none of these products are purchased by tourists.

A full list of tourism-characteristic and tourism-related products is found in table 17, appendix 3 'Tourism product classification'.

The criteria for categorising products are derived from the UNWTO's recommended treatment, while the product classification used is based on the Australian 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 presentational and analytical purposes. It allows analysis to be specifically focused on 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 consumed exclusively by tourists, tourism product classifications provide a way of identifying an industry's supply of products consumed by tourists.

Note that constraints on the availability of input data for provisional accounts mean that a regrouping of tourism-characteristic and tourism-related products is necessary. (See table 17 in appendix 3 'Tourism product classification'.)

Industries producing tourism products

The tourism industry ratio

The tourism industry ratio is the proportion of an industry's output that is consumed by tourists. It provides the means of classifying industries, as 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, or
- the industry's 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.

Therefore, 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
- a direct physical contact occurs between the industry and the tourist buying its products.

Therefore, manufacturing and wholesaling industries are not tourism-related industries.

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

The following points relate to the TSA industry classification:

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

Note that constraints on the availability of input data for provisional accounts mean that supply by product and value added are shown only for tourism-characteristic industries and for all other industries.

Value added

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

	Output (produced goods and services)
<i>less</i>	intermediate consumption (purchased goods and services required to produce outputs)
<i>equals</i>	value added.

The value added of a business is less than the value of its output.

Value added has 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 (ie, consumption of fixed capital)

- net taxes on production and imports – taxes payable (less subsidies receivable) on goods and services (excluding GST) 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 that are sold directly to tourists. This results in a measure of the contribution of tourism to GDP that is consistent with that measured for other industries in the economy.

These goods and services (products) can be produced through the involvement of a manufacturer and a wholesaler before being supplied to retailers to sell to tourists. During this process, a producer can apply both an amount to recover costs associated with providing the goods or services, and a profit component. This amount can take the form of:

- the margin a retailer applies to selling a product to a tourist
- the margin charged by the wholesaler
- the price received by the manufacturer.

The margin represents the mark-up, or the difference between the value at which goods or services are acquired and the value for which they are sold.

For the product to be sold directly to a tourist there needs to be a strong economic link between the tourist and the supplier of the goods or services. This is best represented in the form of a direct or physical contact between the parties, for example a tourist purchasing a souvenir from a retail outlet.

Through selling the souvenir to the tourist, the producer (a retail outlet in this case) will have applied their margin (or 'mark-up') over and above the costs associated with selling this souvenir. It is solely this margin that direct tourism value added is then derived from.

Indirect tourism value added

Indirect tourism value added is generated from the purchase of goods that are subsequently resold to tourists, or the purchase of goods and services used in producing products that are sold directly to tourists. Producers of both these products have no direct relationship with the tourist.

Using the example above, the manufacturer's purchase of raw materials and services used in producing the souvenir, and the margin applied by the wholesaler, represent the components from which indirect tourism value added is derived – for industries that have no direct contact with the tourist.

Relating direct tourism value added and tourism expenditure

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

Total tourism expenditure comprises output sold to tourists, imported goods directly purchased by tourists, and GST on purchases by tourists. Direct tourism value added equals the value of goods and services produced domestically and consumed by tourists, less the value of purchased goods and services required to produce these goods and services (outputs).

The relationship between these concepts is as follows:

	Total tourism expenditure
<i>less</i>	GST
<i>equals</i>	tourism demand
<i>less</i>	imports sold directly to tourists by retailers
<i>equals</i>	tourism output
<i>less</i>	tourism intermediate consumption (including goods for resale)
<i>equals</i>	direct tourism value added
	Tourism intermediate consumption (including goods for resale)
<i>less</i>	imports used in production of goods and services sold to tourists
<i>equals</i>	indirect tourism value added.



Appendix 2: Methodology

Direct tourism value added

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

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

Direct tourism value added measures the value of the output of tourism products by industries, less the value of goods and services used in their production (intermediate consumption). When summed across all industries, it shows the direct value added to the economy by tourism.

Tables 9, 10, 11, and 12 detail the process used to measure direct tourism value added. This involves the following steps:

- Begin with tourism expenditure by type of product (presented in table 9 – and further dissected by type of tourist in table 10).
- Match tourism expenditure by type of product with the total supply of products in the annual supply and use tables of the New Zealand economy. Derive the tourism product ratio for each product by dividing the value of tourism expenditure by total supply of the product.
- Multiply each industry's supply by product by the tourism product ratio, to calculate tourism supply by industry. Table 11 presents tourism supply for tourism-characteristic industries, all other industries, and imports.
- Divide tourism supply by total output by industry, to give tourism industry ratios – the proportion of each industry's total output that is purchased by tourists.
- Multiply the tourism industry ratios through each industry's production account. Sum the resulting series to obtain total tourism value added. Table 12 presents total tourism value added resulting from tourism-characteristic industries and all other industries.

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

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

Differences in deriving input data for final and provisional accounts are outlined in the following sections.

Calculating tourism expenditure

Table 10 presents tourism expenditure by type of product and by type of tourist: international (international visitors and international students); household; and business and government. We describe below how we calculate expenditure by the three types of tourist.

International tourism expenditure

International tourism expenditure comprises both international visitors' and international students' expenditure.

Final accounts

Expenditure by international tourists in New Zealand is derived from the International Visitor Survey (IVS) published by the Ministry of Business, Innovation and Employment (MBIE).

The International Visitor Survey is a sample survey of approximately 9,800 international visitors to New Zealand aged 15 years or older per year, excluding individuals whose purpose of visiting New Zealand was to attend a recognised educational institute, and are foreign-fee paying students.

The International Visitor Survey draws its visitor sample based on measures of the actual number of target population visitors who departed New Zealand from our international airports over the survey time period in the previous year. Using actual historical visitor departure information, time periods are randomly selected with the probability of being selected based on the number of flights during that period – periods with no flights will have no probability of being selected, while those with a high number of flights have a high probability. For Auckland, Wellington, and Queenstown airports, two-hour time periods are used, while for Christchurch airport it is a four-hour time period.

The International Visitor Survey uses a two-part collection process. The first part involves screening departing visitors during the selected time periods for eligibility and collecting email addresses. The second part, where the bulk of the information is captured, is via an online survey, a link to which is sent to those eligible and agreeing to participate.

Each respondent within the sample is weighted to represent their fraction of the total number of all international visitors departing New Zealand using migration data within the survey's target population. Survey response weights are adjusted to reflect the unequal probabilities of respondent selection from the composition of the target population, and known discrepancies between the sample and the population definitions.

The IVS data is supplemented with breakdowns from balanced supply and use accounts, consumers price index (CPI) weightings, and tourism producers' own data. In some instances, tourism producers can provide estimates of the proportions of their output consumed by international visitors.

Broad-level valuations of international visitors' expenditure in New Zealand are derived from transportation and travel services items in the balance of payments (BoP). IVS data is a major source for BoP statistics, but several supplementary sources are also used. TSA totals exclude people who are visiting New Zealand specifically to obtain medical treatment (an adjustment needed because of a conceptual difference between TSA and BoP statistics). Small revisions have been made to the source data in some years. We break down these totals into tourism products, using proportions from balanced supply and use accounts. We compare these splits with other data sources, and refine the totals where additional estimates are available.

Provisional accounts

The same basic data source, the IVS, is also used in the provisional accounts. However, in the absence of supply and use tables, the IVS is not broken down to the same level of product detail found in final accounts. We use the breakdown for the latest final account

to derive the initial product breakdown for the provisional years. This initial product breakdown is subsequently refined during the balancing process (covered in more detail later in this appendix – see ‘Balancing tourism expenditure and tourism production’).

Cruise ship expenditure by international visitors

Expenditure by international cruise ship tourists visiting New Zealand is only partly captured in the IVS. Visitors who complete their cruise journey in New Zealand and depart via a New Zealand airport are within scope to be surveyed by the IVS, and therefore their expenditure reported in the IVS and consequently the TSA.

Visitors who cruise in and cruise out of New Zealand or fly into and cruise out of New Zealand are currently outside of scope for measurement due to the airport departure-based collection of the IVS. These visitors' spending is not included nor estimated in the IVS and the TSA. Statistics NZ and MBIE, together with the cruise industry, are working to determine the full expenditure value of cruise visitors.

Tourism expenditure by international students

International students are defined as those studying in New Zealand for less than 12 months. *Tourism Satellite Account: 2016* incorporates revisions made to source data. This includes changes to student numbers, and the application of GST on tuition fees across the time series used to derive tourism expenditure by international students.

Tourism expenditure by international students is calculated using the following steps:

- Obtain total international student numbers from the Ministry of Education.
- Derive the number of international students studying in New Zealand for less than 12 months as a proportion of total student numbers, by using the number of short-term passenger arrivals visiting New Zealand for education purposes.
- Calculate expenditure on tuition fees using the Ministry of Education's Export Education Levy data (inclusive of GST), a census of international students studying in New Zealand. It includes average tuition fees for students studying at schools, tertiary education institutes, and private tertiary establishments (such as English language schools).
- Calculate expenditure on living costs (including accommodation costs) consistent with how it is calculated by BoP. This involves taking average tuition fee data and applying predetermined living cost multipliers for each type of student.
- Calculate expenditure on airfares by short-term students by multiplying the number of students in New Zealand for less than 12 months as a proportion of total international arrivals, by the total airfare income of resident airlines (from BoP).
- Sum expenditure on tuition fees, living costs, and airfares, to obtain the total tourism expenditure by international students in New Zealand for less than 12 months.

Household tourism expenditure

Household tourism expenditure, shown as household demand in table 10, consists of four components.

These are:

1. Household domestic travel expenditure
2. Outbound travel purchased from New Zealand-resident firms
3. Off-trip purchases of tourism-specific consumer durable goods
4. Imputed rental on holiday homes.

1. Household domestic travel expenditure

Tourism Satellite Account: 2016 uses an administrative data source based on electronic card transaction data to collect and determine household domestic travel expenditure. The Household Tourism Expenditure Estimates (HTEE), developed by Statistics NZ and funded by MBIE, cover the years ended March 2009–16. Prior to the year ended March 2009, we used data from the Domestic Travel Survey (DTS) undertaken by MBIE. The DTS collected the expenditure and behaviours of domestic travellers within New Zealand.

The DTS data collection began in 1999, with data available as both quarterly and annual series through to its cessation in 2013. The DTS data provided information on the nature of domestic travel activity, including the origin and destination of domestic travellers. MBIE categorised the data by purpose of travel, expenditure type, and length of trip (either day trip or overnight trip). The four travel purposes were: holiday, visiting friends and relatives, business, and other. The eight expenditure categories were: transport, accommodation, food, alcohol, gifts and souvenirs, recreation, other shopping, and gambling. DTS expenditure was available by purpose of travel, expenditure category, and length of trip.

We then supplemented the DTS with additional household tourism expenditure for outbound travel, off-trip purchases, and imputed rental on holiday homes – using a mix of sources and methods, as outlined in the following sections.

In the year ended March 2014, the DTS was replaced by a developmental version of the HTEE, which was further developed and fully integrated into *Tourism Satellite Account: 2015*. We have made additional refinements to these estimates for *Tourism Satellite Account: 2016*. The HTEE uses geographic information to determine tourism spending in New Zealand by New Zealanders and is available from the year ending March 2009. The DTS is used in determining prior year estimates.

HTEE source data

Electronic card transaction data is provided to us by Marketview Ltd, who get it from two main sources:

- Paymark – the largest electronic card payment network in New Zealand
- Bank of New Zealand (BNZ) – spending by BNZ cardholders, which excludes any personal identifiers. We call this depersonalised spending.

Paymark data

Data is derived from all transactions made at merchants on the Paymark network. Approximately 70 percent of New Zealand retailers use the Paymark network. The dataset includes all eftpos and credit card transactions made at these retailers. There is no link to the person making the transaction, but transactions are linked to merchants. The Paymark dataset excludes ‘cash-out’ transactions.

From this data a complete valuation of New Zealanders’ spending can be generated, comprising:

- day of the week and time of the day
- where in New Zealand the transaction occurred
- ANZSIC06 (2006 Australian and New Zealand Standard Industry Classification) storetype
- domestic or internationally issued card.

BNZ data

The BNZ dataset is based on the depersonalised eftpos (debit card) and credit card spending of approximately 600,000 BNZ cardholders in the New Zealand retail market. BNZ has approximately a 20 percent share of the cards market, meaning BNZ cardholders account for approximately 1 in 5 retail transactions. These cardholders are

representative of the national population. The dataset includes spending at Paymark and non-Paymark retailers. It excludes 'cash out' transactions and bank transfers.

Through the BNZ dataset, Marketview receives a view of spending at virtually all merchants in New Zealand which receive electronic card spending, regardless of whether the merchant uses the Paymark network or not. They can identify where in New Zealand the transaction occurred and whether the transaction was conducted at a physical store or online.

Sample management

To ensure the BNZ cardholder base is both geographically and demographically distributed in line with the New Zealand population, a weighting is applied by Marketview.

While BNZ cardholders are distributed throughout New Zealand, small variations exist down to an area unit / customer age level. This weighting was calculated by determining the distribution of cardholders and comparing this to the distribution of the overall population.

Marketview use Statistics NZ's area unit population estimates as the basis for the national population. This enables the distribution to change over time, as each year of the data was compared with a different population estimate. For example, Marketview data from 2016 is weighted according to the 2015 population estimates. This ensures significant population changes – such as after the Canterbury earthquakes, or new subdivisions opening – are accounted for in the dataset.

The weighting factor is applied to the dataset by age (in five-year bands starting at 15–19), by census area unit, and by month. This weighting ensures the distribution of BNZ cardholders matches the distribution of the national population, by age, location, and over time. Weighting by age and location ensures management of any bias in the sample, as income and wealth typically increase with age, and wealth can correlate with where a person lives.

Combining data sources

By combining Paymark and BNZ data, Marketview produce a dataset that accurately quantifies:

- the value of spending of each transaction
- the source and origin of those payments eg business vs personal, domestic vs. international tourist
- where in New Zealand the cardholder lives
- where each transaction took place eg physical store vs online, Auckland vs Invercargill
- the industry category of the merchants, as defined by 2006 ANZSIC codes
- the time and day of the purchase.

Defining household tourism expenditure

Household tourism expenditure is defined as expenditure that occurs outside a 40km radius of the meshblock in which the cardholder's address is located, and aligns with industries defined as tourism industries. The 40km reflects the New Zealand definition of travel outside one's usual environment. Tourism industries encompass both characteristic and related industry data along with selected non-tourism industries.

Marketview apply this 40km radius to the combined Paymark and BNZ dataset to determine the HTEE. Exceptions are made where regular behavioural spending patterns show a person's usual environment extends to an area outside the 40km radius, such as commuters. This is removed from the HTEE.

Additional data on internet transactions is collected specifically for selected tourism industries that require travel in order to consume a purchased good. For example, internet expenditure on accommodation and air passenger transport is collected.

Scaling household tourism expenditure data to total economy

As electronic card data reflects only one aspect of household tourism expenditure across the New Zealand economy, Marketview upscale their dataset by adding in a factor for cash and other payment methods. This is calculated as the difference between electronic card spending and total economy spending based on ANZSIC industry information supplied from our Annual Enterprise Survey (AES).

For example, Marketview may record the total value of electronic card spending in ANZSIC industry G4110 at \$100 for the year, with 10 percent being tourism (\$10). The total industry value of G4110 as calculated from AES was \$120. The Marketview card value is thus upscaled by a multiple of 1.2, yielding a total market value of \$120, consistent with AES. The tourism component is still 10 percent, hence tourism spending for that year is calculated at \$12.

The assumption used is that consumer and business spending on cash versus card on tourism and non-tourism related trips are equal.

The HTEE dataset

The HTEE dataset provided by Marketview covers the years 2009–16. At the time of compilation, AES data was available to the 2015 financial year. To produce the HTEE through to 2016, Marketview have estimated the value of each industry in the 2016 provisional year by applying movements for each industry from additional Statistics NZ data sources, including GST data, to the 2015 AES data.

For example, Marketview took annual movements in spending for ANZSIC industry G4110 from the Retail Trade Survey. They applied this to the 2015 AES data to determine a 2016 provisional estimate. They estimated other industries from data indicators sourced from Statistics NZ.

Marketview will update the provisional year estimate as AES data becomes available and indicator data is revised as part of the annual publication cycle of the Tourism Satellite Account.

Turning industry based HTEE into tourism products

The HTEE industry dataset is then broken down into tourism defined products using annual supply-use commodity proportions and retail industries sales data. For validation purposes it is then confronted against HCE commodity data net of overseas visitor expenditure and New Zealanders' travel expenditure abroad. This isolates New Zealanders' spending within New Zealand, allowing for a comparison on an equivalent expenditure basis with the HTEE.

Additional household tourism expenditure

While the HTEE dataset provided by Marketview captures most household tourism expenditure, the TSA supplements the HTEE product breakdowns with its own product expenditure estimates. These include some off-trip purchases of tourism-specific consumer durable goods and imputed rental on holiday homes.

Both the HTEE and additional Statistics NZ tourism product data then provide the initial expenditure levels to feed into the balancing process. These levels can be subsequently modified where necessary (the balancing process is covered in more detail later in this appendix – see 'Balancing tourism expenditure and tourism production').

2. Outbound travel purchased from New Zealand-resident firms

All years

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. We estimate this expenditure from sources including the HTEE and company data.

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

All years

Off-trip expenditure by households on tourism-specific consumer durables (such as tents and sleeping bags) is included in household tourism expenditure. These off-trip purchases are based on data sourced from the HES together with supply-side product data and are added to the on-trip purchases of these goods. Off-trip tourism expenditure is defined in 'Tourism expenditure' in appendix 1 'Conceptual framework'. Read more about consumer durables in the TSA in the 'Special treatments' section later in this appendix.

4. Imputed rental on holiday homes

All years

The TSA includes an imputed rental on dwellings owned by households that are used as holiday homes. We calculate the total number of holiday homes using data from the Census of Population and Dwellings and an annual volume change indicator. We calculate annually an average weekly imputed rental price derived from national accounts imputed rental data. We multiply this price by the number of weeks in the year to give an annual imputed rental price. We then multiply the number of holiday homes by the annual imputed rental price to give the total imputed rental value.

Business and government travel expenditure

Final accounts

Business and government travel expenditure is drawn from intermediate consumption of industry data in the balanced supply and use accounts. We calculate it by applying product ratios reflecting travel expenses to total intermediate consumption for each of business and government from the latest final account. This provides the initial product breakdown, which we subsequently modify during the balancing process (covered in more detail later in this appendix – see 'Balancing tourism expenditure and tourism production').

Provisional accounts

In the absence of balanced supply and use accounts, we first derive intermediate consumption by applying a variety of data sources, including the Annual Enterprise Survey, GST purchases, and annual report data to the latest final account year. Each year is then subsequently derived from the previous year's totals by applying key data source movements. We then apply the product ratio reflecting travel expenses to the derived total intermediate consumption for each of business and government. This provides the initial product breakdown, which we subsequently modify during the balancing process.

Production of tourism goods and services

Final accounts

Analysing the production of tourism-characteristic and tourism-related products starts with the production accounts by industry that underlie the supply and use table. Within the balanced supply and use accounts, we break down each industry's output and intermediate consumption into products. Final demand categories such as household consumption expenditure and exports are also broken down by product. For the TSA, we rearrange output product data from balanced supply and use tables to focus on tourism-characteristic and tourism-related products. We arrange total sales by each industry into tourism-characteristic, tourism-related, and non-tourism-related products.

Provisional accounts

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

Balancing tourism expenditure and tourism production

Final accounts

Supply and use balancing is an established and integral process when compiling the national accounts. It is used "for checking the consistency of statistics on flows of goods and services obtained from quite different kinds of statistical sources" (Inter-Secretariat Working Group on National Accounts, 2008). The supply and use balancing process rigorously examines diverse data sources, reconciling them in a framework that reduces the error margins implicit in the individual data sources.

The supply and use approach provides the best framework to bring the demand and supply sides of the economy into balance. The usual process is to confront supply and demand by product, and perform adjustments so that the value of the supply of each product is equal to the value used. We make adjustments 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 using a single data source, either supply- or demand-based, is reduced. We also performed similar checking of supply and use by product, which underlies Statistics NZ's annual supply and use models.

The TSA begins with the balanced supply and use tables, so we balance all products in terms of their total supply and total use. We break down these 'product accounts' further into their tourism and non-tourism components. The resulting tourism supply and tourism use may no longer be balanced because of the methodology used to make this split. We then use the same type of data confrontation as used in supply and use balancing to ensure that tourism supply is equal to tourism use.

A typical example of how this process is 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 GST is deducted from tourism expenditure for this comparison – so production for and expenditure on tourism products are both valued in producers' prices.

2. Re-examine the methodology used, checking for errors, conceptual inconsistencies, and methodological problems.
3. Compare the strength of the respective supply- and demand-side data sources, identifying areas where particular strengths and weaknesses lie. Typically, the strengths are in the supply-side industry and product data, and the total demand by type of tourist data. Demand for individual products is often considered to be of weaker quality.

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

Provisional accounts

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

Calculating direct tourism value added

Derivation of the tourism product ratio

Tourism consumption for each product is divided by total supply to give the tourism product ratio. This ratio measures the proportion of a product's output that is 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 deriving direct tourism value added and employment.

To derive tourism supply by product by industry, we apply the tourism product ratio (from table 10) to the supply of that product by each industry. We then calculate total tourism supply by each industry by summing tourism supply for all products.

For example, we applied the tourism product ratio for accommodation services to the output of all industries supplying this product. This gave tourism supply of accommodation services by each industry. We then divided tourism supply by each industry by total industry output, to give the tourism industry ratio. It is worth noting that although the accommodation industry is the dominant supplier of accommodation services they are not the sole supplier, as other industries can also supply this product.

While calculating the tourism industry ratio and tourism supply by industry is an important step in deriving direct tourism value added, neither is shown in provisional years as these values are themselves derived from the gross output of each industry. Table 11 shows total supply and tourism supply by product for tourism-characteristic and all other industries.

Derivation of direct tourism value added

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

Production accounts by industry are not available for provisional years. Therefore, before we can calculate tourism value added, we derive provisional production accounts for each

industry. We use data from a variety of sources, including GST sales and purchases, annual reports, and the Annual Enterprise Survey, 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 split by tourism-characteristic and all other industries. This reflects the less detailed nature of total value added by industry in years in which tourism value added is derived as a subset.

We make a major assumption relating to the use of the tourism product ratio and the tourism industry ratios in compiling the TSA. 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 goods and services sold to tourists, then 50 percent of its inputs are used to produce those goods and services. This is likely to be a more valid assumption for an industry that makes a range of products that are very similar, requiring similar inputs. However, in some instances the assumption is likely to be less valid; for example where an industry has a low degree of tourism specialisation, and a diverse range of products are produced.

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

Direct tourism employment

Direct tourism employment (see table 15) is derived by applying tourism industry ratios to the number of people employed in each industry. This approach produces a value for the number of people in each industry as a result of tourism.

In *Tourism Satellite Account: 2016*, employment numbers come from Linked Employer-Employee Data (LEED) annual statistics by each industry. Employment and tourism employment are presented by the number of people employed, for both employees and working proprietors, with a series available from 2000.

LEED data is based on administrative tax data, where the number of hours worked is not available, so we cannot provide a full-time and part-time split. Further discussion about LEED is covered in the 'Tourism employment source data' section later in this appendix.

Tourism industry profitability

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

Indirect effects of tourism

Indirect imports and tourism value added

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

	Total tourism expenditure
<i>less</i>	GST
<i>equals</i>	tourism demand
<i>less</i>	imports sold directly to tourists by retailers
<i>equals</i>	tourism output
<i>less</i>	tourism intermediate consumption (inclusive of goods for resale)
<i>equals</i>	direct tourism value added
	Tourism intermediate consumption (inclusive of goods for resale)
<i>less</i>	imports used in production of goods and services sold to tourists
<i>equals</i>	indirect tourism value added.

We discuss the derivation of imports used in producing goods and services sold to tourists and indirect tourism value added below.

Imports used in production of goods and services sold to tourists

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

We calculate the value of imports used in producing products sold to tourists using the table of cumulated import coefficients of industries, and categories of final demand, from 2007 input-output tables. This is the most recent cumulated import coefficients table available. It 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 produces the value of imports used in producing goods and services sold to tourists.

Indirect tourism value added

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

Final accounts

Indirect tourism value added is calculated directly using the table of industry-by-industry total requirements from 2007 input-output tables, the most recent total requirements table available.

Provisional accounts

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

Indirect tourism employment

The number of people employed indirectly in tourism is presented in table 5.

Final accounts

Indirect tourism employment takes, as its starting point, indirect tourism value added by industry. We calculate the ratio of indirect tourism value added to value added, and multiply it by employment by industry, to give indirect tourism employment. We sum these industry estimates to calculate the number of people employed indirectly in tourism.

Provisional accounts

For provisional years, neither direct tourism value added nor indirect tourism value added is available by industry in the New Zealand System of National Accounts (NZSNA). Therefore, we calculate the ratio of indirect tourism value added to value added, by industry, from the latest final year. We multiply this by employment by industry, to give the number of people employed indirectly in tourism.

Supply and use framework

Final accounts

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

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

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

Provisional accounts

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

- deriving the output of each industry (as outlined earlier in this appendix)
- breaking down total output into supply of each tourism product, using the industry output breakdown from the latest available supply and use analysis. This provides the initial product breakdown, which we subsequently modify during the balancing process
- calculating value added by industry within the constraint of published total value added.

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

Employment source data

Linked Employer-Employee Data (LEED)

LEED uses existing administrative data from the Inland Revenue taxation system and business data from Statistics NZ's Business Register (BR). LEED provides statistics on a variety of job measurements including the number of people employed, number of filled jobs, job flows, worker flows, mean and median earnings for continuing jobs and new hires, and total earnings. This information gives an insight into the operation of New Zealand's labour market on both a quarterly and annual basis from a national, regional, and territorial authority perspective.

The LEED annual statistics cover all individuals ('employees') who either receive income from which tax is deducted at source, or from self-employment. In LEED, the employer is the geographical unit or physical location of the business rather than the administrative reporting unit. For example, a nationwide retail chain may have one Inland Revenue reporting unit covering all of its retail branches. In LEED, each branch is considered to be a distinct employer.

For inclusion in LEED annual statistics, a person must:

- be aged 15 years and over at the start of the tax year
- have received non-zero income with tax deducted at source through the Employer Monthly Schedule (EMS) system, or self-employment income in the reference period.

All income measures are before tax.

The Tourism Satellite Account uses the LEED annual Table 1.5: Main earnings source, by industry (ANZSIC06) measure, which allocates a person to the industry where they have generated the most earnings from in the tax year.

[For more information about LEED employment, refer to Linked Employer-Employee Data \(LEED\).](#)

Employment and tourism employment estimates for 2015 and 2016

Employment and tourism employment are presented by the number of people employed, for both employees and working proprietors, with a series available from 2000. As LEED annual statistics are only available up until 2014 at the time of publication, *Tourism Satellite Account: 2016* estimates for the years 2015 and 2016. We will update these estimates as LEED becomes available as part of the annual publication cycle of the Tourism Satellite Account.

These are derived for both employees and working proprietors using differing employment data sources.

- Employee estimates for 2015 and 2016 are derived using a more timely, summary source of EMS data. This data is currently used as an experimental series and business size indicator for the BR. For the purposes of the TSA, the annual March month movements are then applied to 2014 employee industry data.
- Working proprietor estimates for 2015 and 2016 are derived by applying the year ended March (quarterly mean) annual HLFS industry movements to 2014 LEED working proprietor industry data.

Tourism employment LEED examples

The following tourism industry examples illustrate how to use the LEED-based 'number of people employed in tourism' measure. Examples of how employment would be measured from a LEED filled-jobs measure perspective are provided for comparison.

1. Angelique holds three part-time jobs in Queenstown – at a tourist attraction, in a restaurant, and at an accommodation provider. During the year Angelique's highest earnings were generated from the restaurant, therefore she would be assigned to the food and beverage services industry.
Under the LEED-based measures this equates to:
 - number of people employed = 1
 - number of filled jobs = 3.
2. Chase holds a full-time job in summer in Ohakune working at an outdoor equipment retail store. In winter, he works full time at the cafés on the ski field. Over the year Chase generated more earnings from the retail store than his café work, therefore he would be assigned to the retail trade industry.
Under the LEED-based measures this equates to:
 - number of people employed = 1
 - number of filled jobs = 2.
3. Michael is an owner-operator running two seasonal businesses in Nelson – one sightseeing, and the other fishing tours. As a working proprietor, Michael has a unique ID number and the businesses he runs will also have their own separate ID number. The same rule for jobs data can be applied to working proprietors, where the link between the person and geographic business location is the key relationship.

For Michael's two seasonal businesses, the data is recorded as:

Name of business	Owner ID number	Business ID number
Michael's first seasonal business	12345	98765
Michael's second seasonal business	12345	87654

Most of Michael's self-employed income was generated from his first seasonal business, therefore he would be allocated to that business's industry. Under the LEED-based measures this equates to:

- number of people employed = 1
 - number of filled jobs = 2.
4. Michelle and James live together in Napier on the understanding that Michelle is the breadwinner and James is the homemaker. Michelle operates her own small business selling tourist souvenirs during the week, while on the weekends she works for the local holiday park. James helps at the holiday park in the month of February – his only employment for the year. Michelle's highest earnings were generated from her retail business, therefore she would be allocated to the retail trade industry. James's employment would be allocated to the accommodation industry. Under the LEED-based measures this equates to:
 - number of people employed = 2 (1 Michelle and 1 James)
 - number of filled jobs = 3 (2 Michelle and 1 James).

Special treatments

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

Treatment of the margin

In the national accounts, purchases of retail goods can effectively be split into three components:

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

The treatment adopted in the TSA is illustrated in the following example.

A tourist purchases a jersey for \$100, comprising a \$10 mark-up from the retailer (who has direct contact with the tourist), a \$15 margin from the wholesaler, and \$75 charged by the manufacturer. The breakdown is as follows:

- the full purchase price of the jersey (\$100) is recorded as total tourism expenditure
- the margin (or mark-up) by the retailer selling the jersey to the tourist is the retail output (\$10) from which direct tourism value added is then derived
- the remaining \$90 is the price received by the manufacturer (\$75) and the margin charged by the wholesaler (\$15); neither of these has direct contact with the tourist and is the output from which indirect value added is derived.

Consumer durables

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

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

Holiday homes

An imputed rental on owner-occupied dwellings is calculated in the national accounts. This is to avoid distortions over time resulting from changes in the number of people renting rather than 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).

Although a holiday home may not be in full-time use, we assume it is available to be used all year, and therefore allocate the rental from owning the holiday home to tourism expenditure.

For a TSA, we assume demand for holiday homes to come solely from domestic recreational tourists, due to a lack of data on the origin of holiday homes. We set total supply of holiday homes 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

TSA's apply the net approach to recording package tour expenditure, where the organiser's margin for arranging the tour is recorded as the sole output, while the components of the tour are treated as being purchased directly by the tourist.

For example, a travel agent sells a package tour to a tourist. The travel agent (organiser) records a margin from the sale of the package tour. The expenditure on each of the components of the tour is captured under the respective industry's output.

Travel agency services

Travel agents obtain their income in two major ways. Firstly, they earn income by buying travel products (generally at a bulk discount) and selling them to travellers, thereby 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). TSA's use special treatments for each of these means of generating income:

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

Non-market output consumed by tourists

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

To implement the UNWTO recommendation requires:

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

Identifying individualised and collective non-market consumption is a recommendation from *System of National Accounts 2008* (Inter-Secretariat Working Group on National Accounts, 2008). However, we have only partly implemented this (local government has not been fully split). In areas that have been split, the breakdowns are not sufficiently detailed for TSA purposes.

Appendix 3: Tourism product classification

Tourism product information is less detailed in a provisional tourism satellite account than it is for a final tourism satellite account. Table 17 shows these distinctions. The inclusions and exclusions are not exhaustive, but are intended to clarify coverage from a tourism perspective.

Table 17

Tourism product classification			
Tourism product for provisional tourism satellite accounts	Tourism product for tourism satellite accounts	Includes	Excludes
Accommodation services	Accommodation services	Hotel and other lodging services	Accommodation for the elderly and students' accommodation (eg student hostels)
Food and beverage serving services	Food and beverage serving services	Meal serving services (including takeaways), event catering, and other food serving services, beverage serving services for consumption on the premises	
Air passenger transport	Air passenger transport	Scheduled and unscheduled air passenger transport, rental services of passenger aircraft with operator	Air freight transport
Other passenger transport	Road passenger transport	Bus and taxi passenger transport, rental services of passenger cars, buses and coaches with operator, other unscheduled road passenger services	Road freight transport

Table continues next page

Table 17 continued

Tourism product classification			
Tourism product for provisional tourism satellite accounts	Tourism product for tourism satellite accounts	Includes	Excludes
Other passenger transport (continued)	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	Reservation services, tour operator services, tourist guide services, visitor information services, ticket selling	Freight agency services
	Motor vehicle hire or rental	Hiring of cars, trucks, buses, and campervans without operator	Taxis, hiring of motor vehicles with drivers, machinery hire
Imputed rental on holiday homes	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	
Cultural, recreation, and gambling services	Libraries, archives, museums, and other cultural services	Historical sites and buildings, nature reserves, performing arts	
	Other sport and recreation services	Sports and recreational sports facility operation services, amusement park and similar attraction services, other sports and recreation services	

Table continues next page

Table 17 continued

Tourism product classification			
Tourism product for provisional tourism satellite accounts	Tourism product for tourism satellite accounts	Includes	Excludes
Cultural, recreation, and gambling services (continued)	Gambling services	Casino-based gambling services, lottery, racing, and sports betting services, other gambling services	
Retail sales – alcohol, food, and beverages	Retail sales – alcohol	Alcoholic beverages purchased from liquor stores and other retail outlets	Alcohol sold for consumption on premises
	Retail sales – food, beverages, tobacco, and other groceries	Supermarkets, speciality stores, and other retail outlets	
Retail sales – fuel and other automotive products	Retail sales – fuel and other automotive products	Petrol, diesel, motor oils, rubber tyres and tubes	
Retail sales – other	Retail sales – clothing and footwear		
	Retail sales – tourism consumer durables	Made-up textile articles, luggage, motor vehicles, pleasure and sporting boats, sports goods	
	Retail sales – retail medicines, toiletries		
	Retail sales – other shopping		
Education services	Education services	Spending on education services by international students studying in New Zealand for less than 12 months	Spending on education services by international students studying in New Zealand for more than 12 months

Table continues next page

Table 17 continued

Tourism product classification			
Tourism product for provisional tourism satellite accounts	Tourism product for tourism satellite accounts	Includes	Excludes
Other tourism products	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	
	Other tourism-related services	Telecommunications, postal and courier services, other tourism products	
	Other personal services	Laundry services, hairdressing, beauty services	
Source: Statistics New Zealand			

Appendix 4: Tourism industry concordance

Within the national accounting system, industries are defined as groups of producers that supply particular goods or services. The tourism industry is different. It is defined not by its goods or services, but by the particular group of consumers – tourists – who purchase its output. Tourism industry information is more aggregated in a provisional tourism satellite account than it is for a final tourism satellite account. This is shown in table 18.

Table 18

Tourism industry concordance				
Tourism industry category for provisional tourism satellite accounts	Tourism industry category for tourism satellite accounts	Tourism industry component	ANZSIC industry subdivision/group code	ANZSIC industry subdivision/group title
Tourism-characteristic industries	Tourism-characteristic industries	Accommodation	H44	Accommodation
		Food and beverage services	H45	Food and beverage services
		Road passenger transport	I46	Road transport
		Rail passenger transport	I47	Rail transport
		Water passenger transport	I48	Water transport
		Air passenger transport	I49	Air and space transport
		Other transport, transport support, and travel and tour services	I50	Other transport
			I52	Transport support services
			N722	Travel agency and tour arrangement services

Table continues next page

Table 18 continued

Tourism industry concordance				
Tourism industry category for provisional tourism satellite accounts	Tourism industry category for tourism satellite accounts	Tourism industry component	ANZSIC industry subdivision/group code	ANZSIC industry subdivision/group title
Tourism-characteristic industries (continued)	Tourism-characteristic industries (continued)	Rental and hiring services	L661	Motor vehicle and transport equipment rental and hiring
		Arts and recreation services	R89	Heritage activities
			R90	Creative and performing arts activities
			R91	Sports and recreation activities
			R92	Gambling activities
Tourism-related industries	Tourism-related industries	Retail trade	G39	Motor vehicle and motor parts retailing
			G40	Fuel retailing
			G41	Food retailing
			G42	Other store-based retailing

Table continues next page

Table 18 continued

Tourism industry concordance				
Tourism industry category for provisional tourism satellite accounts	Tourism industry category for tourism satellite accounts	Tourism industry component	ANZSIC industry subdivision/group code	ANZSIC industry subdivision/group title
Tourism-related industries (continued)	Tourism-related industries (continued)	Retail trade (continued)	G43	Non-store retailing and retail commission-based buying and/or selling
		Education and training	P80	Preschool and school education
			P81	Tertiary education
			P82	Adult, community, and other education
All other industries	All non-tourism-related industries			All other ANZSIC industries
Note: ANZSIC – Australian and New Zealand Standard Industrial Classification Source: Statistics New Zealand				



Appendix 5: Detailed tables, year ended March 2013

Tables 19–26 in this section provide details of the tourism satellite account for the year ended March 2013, the latest year for which balanced supply and use tables are available. Tables 19–26 are also available in Excel format from the Statistics NZ website (www.stats.govt.nz).

Appendix 5 tables

- 19 Tourism expenditure, by type of product and type of tourist, year ended March 2013
- 20 New Zealand System of National Accounts production accounts, by industry, year ended March 2013
- 21 Sales by type of product and industry, year ended March 2013
- 22 Derivation of tourism product ratios, year ended March 2013
- 23 Derivation of tourism industry ratios, year ended March 2013
- 24 Derivation of direct tourism value added, year ended March 2013
- 25 Direct tourism employment, by industry, year ended March 2013
- 26 Gross fixed capital formation and net capital stock, by industry, year ended March 2013

Detailed tables for the years ended March 2014, 2015, and 2016 will be available on www.stats.govt.nz when the balanced supply and use tables for these years are compiled.

Table 19
Tourism expenditure
 By type of product and type of tourist⁽¹⁾⁽²⁾
 Year ended March 2013

Product	Domestic demand			International demand	Total demand
	Business demand	Government demand	Household demand		
	\$(million)				
Tourism-characteristic products					
Accommodation services	377	168	489	1,132	2,166
Food and beverage serving services	253	89	1,131	1,388	2,862
Road, rail, and water passenger transport ⁽³⁾	148	50	349	338	885
Air passenger transport	700	342	1,189	2,001	4,232
Travel agency services	285	114	309	330	1,038
Motor vehicle hire or rental	443	167	439	143	1,191
Imputed rental on holiday homes	0	0	699	0	699
Libraries, archives, museums, and other cultural services	0	0	121	80	201
Other sport and recreation services	0	0	229	153	382
Total tourism-characteristic products	2,206	930	4,954	5,566	13,655
Tourism-related products					
Retail sales – alcohol	0	0	548	66	614
Retail sales – clothing and footwear	0	0	952	346	1,298
Retail sales – food, beverages, tobacco, and other groceries	0	0	1,002	224	1,226
Retail sales – fuel and other automotive products	529	266	523	602	1,921
Retail sales – retail medicines, toiletries	0	0	388	90	478
Retail sales – tourism consumer durables	0	0	852	63	916
Retail sales – other shopping	0	0	1,028	1,092	2,120
Financial services	18	2	1	4	25
General insurance (incl travel insurance)	41	4	53	22	120
Social and health-related services	0	0	461	52	513
Gambling services	0	0	171	61	232
Education services	0	0	208	430	637
Other tourism-related services	109	37	257	514	917
Other personal services	0	0	98	17	115
Total tourism-related products	698	310	6,542	3,583	11,133
Total tourism demand excluding GST	2,903	1,240	11,496	9,149	24,788
GST paid on purchases by tourists	5	1	1,404	749	2,159
Total tourism expenditure	2,908	1,240	12,901	9,898	26,947

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

2. All values are in producers' prices.

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

Source: Statistics New Zealand

Table 20**New Zealand System of National Accounts production accounts**By industry⁽¹⁾⁽²⁾

Year ended March 2013

	Tourism-characteristic industries							Tourism-related industries		All non-tourism-related industries	Total industry
	Accommodation	Food and beverage services	Road, rail, and water transport (3)	Air and space transport	Other transport, transport support, and travel and tour services	Rental and hiring services	Arts and recreation services	Retail trade	Education and training		
	\$(million)										
Published GDP	...	...	...	...	...	...	...	...	...	...	217,995
Less GST, import duties, and other taxes on production	...	...	...	...	...	...	...	...	...	...	18,512
Contribution to GDP from production	1,297	2,822	3,477	1,596	3,711	1,666	3,127	9,299	10,181	162,306	199,483
Equivalent to total output	2,614	6,225	8,713	5,021	5,439	2,855	5,911	15,532	14,068	361,309	427,687
Less intermediate consumption	1,316	3,402	5,236	3,424	1,728	1,189	2,784	6,233	3,887	199,003	228,204
Components of GDP											
Compensation of employees	686	1,923	1,970	978	1,466	459	1,478	5,821	8,411	71,709	94,901
Gross operating surplus	586	866	1,224	593	2,177	1,178	1,316	3,425	1,725	81,648	94,737
Taxes on production and imports	28	51	598	26	70	32	357	77	60	9,497	10,796
Less subsidies	3	18	315	-	2	2	24	24	15	548	951

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

2. All values are in producers' prices.

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

Symbol:

... not applicable

Source: Statistics New Zealand

Table 21**Sales by type of product and industry⁽¹⁾⁽²⁾**

Year ended March 2013

Product	Tourism-characteristic industries							Tourism-related industries		All non-tourism-related industries	Imports	Total industry (supply)
	Accommodation	Food and beverage services	Road, rail, and water transport ⁽³⁾	Air and space transport	Other transport, support, and travel and tour services	Rental and hiring services	Arts and recreation services	Retail trade	Education and training			
\$(million)												
Sales of tourism-characteristic products												
Accommodation services	1,463	288	0	0	1	0	77	0	338	98	0	2,264
Food and beverage serving services	759	5,091	7	0	32	0	347	259	166	438	0	7,100
Road, rail, and water passenger transport ⁽⁴⁾	32	0	1,296	0	232	1	2	1	33	15	0	1,612
Air passenger transport	0	0	0	4,288	1	0	0	1	46	4	0	4,340
Travel agency services	14	0	9	24	951	2	11	0	2	45	0	1,059
Motor vehicle hire or rental	0	0	17	145	4	1,355	0	8	0	261	0	1,789
Imputed rental on holiday homes	0	0	0	0	0	0	0	14	2	682	0	699
Libraries, archives, museums, and other cultural services	0	0	0	0	0	0	325	0	38	22	0	385
Other sport and recreation services	38	0	0	0	9	31	1,216	0	33	84	0	1,411
Total tourism-characteristic products	2,306	5,379	1,329	4,457	1,230	1,389	1,979	283	658	1,649	0	20,658
Sales of tourism-related products												
Retail sales – alcohol	236	415	0	0	0	0	0	202	0	3,968	494	5,316
Retail sales – clothing and footwear	0	0	0	0	0	0	0	1,571	8	993	2,258	4,831
Retail sales – food, beverages, tobacco, and other groceries	21	273	0	0	2	0	0	3,808	0	38,944	4,596	47,644
Retail sales – fuel and other automotive products	0	0	0	0	0	0	0	602	0	8,105	3,776	12,482
Retail sales – retail medicines, toiletries	0	2	0	0	0	0	0	1,025	0	2,374	1,962	5,363
Retail sales – tourism consumer durables	0	0	1	0	0	0	0	2,351	1	5,387	6,712	14,451
Retail sales – other shopping	0	0	2	0	1	140	16	4,107	51	6,706	5,415	16,439
Financial services	0	0	0	0	0	0	0	3	1	3,184	0	3,187
General insurance (incl travel insurance)	0	0	0	0	0	0	0	0	0	3,465	0	3,465
Social and health-related services	0	0	0	0	0	0	6	0	3	9,113	0	9,122
Gambling services	0	10	0	0	0	0	1,892	0	0	12	0	1,914
Education services	0	0	1	8	3	0	1	0	4,262	575	0	4,850
Other tourism-related services	0	3	241	5	184	9	2	280	17	21,673	0	22,414
Other personal services	0	0	0	0	0	6	0	0	0	1,585	0	1,592
Total tourism-related products	257	703	245	13	191	155	1,918	13,949	4,343	106,083	25,212	153,069
Sales of all domestically produced non-tourism-related products												
	69	158	7,107	552	4,049	1,263	2,056	1,547	9,043	253,329	...	279,173
Total sales	2,632	6,240	8,681	5,022	5,470	2,807	5,953	15,778	14,044	361,060	25,212	452,901
Other output items	-19	-16	32	-2	-30	48	-42	-246	24	249	...	1
Less imports of tourism-related products ⁽⁵⁾	25,212	25,212
Total industry output	2,614	6,225	8,713	5,021	5,439	2,855	5,911	15,532	14,068	361,309	...	427,687

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

2. All values are in producers' prices.

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

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

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

Symbol:

... not applicable

Source: Statistics New Zealand

Table 22
Derivation of tourism product ratios⁽¹⁾⁽²⁾
 Year ended March 2013

Product	Total demand (from table 19)	Total supply (from table 21)	Tourism product ratio ⁽³⁾
	\$(million)		
Tourism-characteristic products			
Accommodation services	2,166	2,264	0.96
Food and beverage serving services	2,862	7,100	0.40
Road, rail, and water passenger transport ⁽⁴⁾	885	1,612	0.55
Air passenger transport	4,232	4,340	0.98
Travel agency services	1,038	1,059	0.98
Motor vehicle hire or rental	1,191	1,789	0.67
Imputed rental on holiday homes	699	699	1.00
Libraries, archives, museums, and other cultural services	201	385	0.52
Other sport and recreation services	382	1,411	0.27
Total tourism-characteristic products	13,655	20,658	...
Tourism-related products			
Retail sales – alcohol	614	5,316	0.12
Retail sales – clothing and footwear	1,298	4,831	0.27
Retail sales – food, beverages, tobacco, and other groceries	1,226	47,644	0.03
Retail sales – fuel and other automotive products	1,921	12,482	0.15
Retail sales – retail medicines, toiletries	478	5,363	0.09
Retail sales – tourism consumer durables	916	14,451	0.06
Retail sales – other shopping	2,120	16,439	0.13
Financial services	25	3,187	0.01
General insurance (incl travel insurance)	120	3,465	0.03
Social and health-related services	513	9,122	0.06
Gambling services	232	1,914	0.12
Education services	637	4,850	0.13
Other tourism-related services	917	22,414	0.04
Other personal services	115	1,592	0.07
Total tourism-related products	11,133	153,069	...
Total tourism demand excluding GST	24,788	173,727	...
GST paid on purchases by tourists	2,159	...	...
Total tourism expenditure	26,947	...	...

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

2. All values are in producers' prices.

3. Tourism product ratios shown in this table may differ at the industry level for some products from the ratios used to derive tourism supply in table 23. Supply is calculated at a more detailed level than the level presented in other tables.

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

Symbol:

... not applicable

Source: Statistics New Zealand

Table 23**Derivation of tourism industry ratios⁽¹⁾⁽²⁾**

Year ended March 2013

Product	Tourism-characteristic industries							Tourism-related industries		All non-tourism-related industries; imports sold directly to tourists by retailers ⁽⁴⁾	Total industry (tourism supply)
	Accommodation	Food and beverage services	Road, rail, and water transport ⁽³⁾	Air and space transport	Other transport, support, and travel and tour	Rental and hiring services	Arts and recreation services	Retail trade	Education and training		
\$(million)											
Tourism-characteristic products											
Accommodation services	1,399	276	0	0	1	0	74	0	323	93	2,166
Food and beverage serving services	313	2,045	3	0	14	0	152	94	67	173	2,862
Road, rail, and water passenger transport ⁽⁶⁾	16	0	650	0	193	0	1	0	17	7	885
Air passenger transport	0	0	0	4,181	1	0	0	1	45	4	4,232
Travel agency services	14	0	9	24	933	2	11	0	2	44	1,038
Motor vehicle hire or rental	0	0	11	97	2	902	0	5	0	174	1,191
Imputed rental on holiday homes	0	0	0	0	0	0	0	14	2	682	699
Libraries, archives, museums, and other cultural services	0	0	0	0	0	0	169	0	20	11	201
Other sport and recreation services	11	0	0	0	2	9	329	0	8	23	382
Total tourism-characteristic products purchased by tourists											
	1,753	2,321	673	4,302	1,146	913	737	114	485	1,211	13,655
Tourism-related products											
Retail sales – alcohol	53	92	0	0	0	0	0	53	0	415	614
Retail sales – clothing and footwear	0	0	0	0	0	0	0	491	2	805	1,298
Retail sales – food, beverages, tobacco, and other groceries	6	48	0	0	0	0	0	257	0	914	1,226
Retail sales – fuel and other automotive products	0	0	0	0	0	0	0	182	0	1739	1921
Retail sales – retail medicines, toiletries	0	0	0	0	0	0	0	154	0	323	478
Retail sales – tourism consumer durables	0	0	0	0	0	0	0	188	0	727	916
Retail sales – other shopping	0	0	0	0	0	22	11	600	17	1470	2120
Financial services	0	0	0	0	0	0	0	0	0	25	25
General insurance (incl travel insurance)	0	0	0	0	0	0	0	0	0	120	120
Social and health-related services	0	0	0	0	0	0	0	0	0	513	513
Gambling services	0	1	0	0	0	0	230	0	0	1	232
Education services	0	0	0	1	1	0	0	0	491	144	637
Other tourism-related services	0	0	23	0	15	0	0	33	4	841	917
Other personal services	0	0	0	0	0	0	0	0	0	114	115
Total tourism-related products purchased by tourists											
	59	142	24	1	16	22	242	1,960	514	8,152	11,133
Direct tourism sales	1,813	2,463	697	4,303	1,162	936	978	2,074	999	9,363	24,788
Total industry output	2,614	6,225	8,713	5,021	5,439	2,855	5,911	15,532	14,068	361,309	427,687
Tourism industry ratio	0.69	0.40	0.08	0.86	0.21	0.33	0.17	0.13	0.07	0.02	...

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

2. All values are in producers' prices.

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

4. The 'all non-tourism-related industries' ratio is calculated exclusive of imports sold directly to tourists by retailers.

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

Symbol:

... not applicable

Source: Statistics New Zealand

Table 24**Derivation of direct tourism value added⁽¹⁾⁽²⁾**

Year ended March 2013

	Tourism-characteristic industries							Tourism-related industries		All non-tourism-related industries	Total industry
	Accommodation	Food and beverage services	Road, rail, and water transport ⁽³⁾	Air and space transport	Other transport, support, and travel and tour services	Rental and hiring services	Arts and recreation services	Retail trade	Education and training		
\$(million)											
Tourism industry ratio	0.69	0.40	0.08	0.86	0.21	0.33	0.17	0.13	0.07	0.02	...
Direct tourism value added	900	1,117	280	1,368	618	546	513	1,204	683	3,114	10,343
Equivalent to tourism output	1,813	2,463	697	4,303	1,162	936	978	2,074	999	6,805	22,229
Less tourism intermediate consumption	913	1,346	417	2,935	544	390	466	869	316	3,690	11,886
Contribution to GDP from production	...	...	...	...	...	...	...	...	...	...	199,483
Percent											
Direct tourism value added as a percentage of total industry contribution to GDP	...	...	...	...	...	...	...	...	...	...	5.2
\$(million)											
Components of direct tourism value added											
Tourism compensation of employees	476	761	156	838	390	150	248	770	523	1,200	5,512
Tourism gross operating surplus	407	343	99	508	217	386	212	427	157	1,538	4,294
Tourism taxes on production and imports	19	20	48	22	11	10	57	11	6	384	588
Less tourism subsidies	2	7	23	-	1	1	4	3	2	8	50

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

2. All values are in producers' prices.

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

Symbol:

... not applicable

Source: Statistics New Zealand

Table 25
Direct tourism employment
 By industry⁽¹⁾⁽²⁾
 Year ended March 2013

	Tourism-characteristic industries							Tourism-related industries		All non-tourism-related industries	Total industry
	Accommodation	Food and beverage services	Road, rail, and water transport ⁽³⁾	Air and space transport	Other transport, transport support, and travel and tour services	Rental and hiring services	Arts and recreation services	Retail trade	Education and training		
Number											
Total employment											
Employees	29,661	106,980	36,003	10,626	23,373	9,870	33,786	193,179	177,780	1,307,427	1,928,682
Working proprietors	3,684	13,200	8,517	171	2,952	2,211	7,437	25,284	6,381	329,307	399,147
Number of people employed	33,345	120,180	44,523	10,797	26,325	12,078	41,223	218,460	184,161	1,636,737	2,327,832
Tourism industry ratio ⁽⁴⁾	0.69	0.40	0.08	0.86	0.21	0.33	0.17	0.13	0.07	0.02	...
Tourism employment											
Tourism employees	20,469	42,792	2,880	9,138	4,911	3,258	5,742	25,113	12,444	26,148	152,892
Tourism working proprietors	2,544	5,283	681	147	621	732	1,263	3,285	447	6,585	21,582
Number of people directly employed in tourism	23,010	48,072	3,561	9,288	5,529	3,987	7,008	28,398	12,891	32,736	174,477
Percent											
Number of people directly employed in tourism as a percentage of the total number of people employed ⁽⁵⁾	7.5

1. Individual figures in this table have been rounded, and discrepancies may occur between sums of components and totals.

2. Total employment numbers by industry are sourced from Linked Employer-Employee Data.

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

4. The tourism industry ratio is sourced from table 24.

5. Percentage is calculated from unrounded employment numbers.

Symbol:

... not applicable

Source: Statistics New Zealand

Table 26**Gross fixed capital formation and net capital stock**By industry⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾

Year ended March 2013

	Tourism-characteristic industries							Total tourism-characteristic industries	All other industries (6)	Total industry
	Accommodation	Food and beverage services	Road, rail, and water transport(5)	Air and space transport	Other transport, transport support, and travel and tour services	Rental and hiring services	Arts and recreation services			
	\$(million)									
Gross fixed capital formation										
Asset type										
Residential buildings	0	0	0	0	0	0	0	0	11,097	11,098
Non-residential buildings	152	119	45	7	61	39	272	695	4,579	5,274
Other construction	0	0	11	0	2,450	0	11	2,472	4,722	7,195
Land improvement(7)	2	1	0	0	0	1	16	22	907	928
Transport equipment	5	19	621	94	69	668	22	1,497	1,806	3,303
Plant, machinery, and equipment	-8	200	107	11	653	316	315	1,594	8,533	10,127
Intangible assets	15	24	31	8	61	19	83	240	6,806	7,046
Total gross fixed capital formation	166	363	815	120	3,295	1,042	720	6,521	38,450	44,971
Net capital stock										
Total net capital stock	4,039	3,429	6,063	2,052	47,844	5,465	9,615	78,507	541,866	620,373

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

2. All values are in purchasers' prices.

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

4. Gross fixed capital formation by industry and asset type excludes weapons systems.

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

6. The 'all other industries' column includes all tourism-related and non-tourism-related industries.

7. Land improvement is shown in gross fixed capital formation, but does not form a part of net capital stock.

Source: Statistics New Zealand



Glossary

National accounts definitions

Basic prices

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

Change in inventories

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

Compensation of employees

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

Consumption of fixed capital

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

Exports of goods and services

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

Gross domestic product (GDP)

The total market value of goods and services produced in New Zealand after deducting the cost of goods and services used 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, hydroelectric construction, roading, and improvements to land. Land is excluded from gross fixed capital formation. Included is the value of construction work done by a firm's own employees. The term 'gross' indicates that consumption of fixed capital has not been deducted from the value of the outlays.

Gross operating surplus

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

GST on production

The transactions of registered producers are recorded excluding goods and services tax (GST), while those of final consumers (including producers of exempt goods and

services) are recorded at actual market prices. The potential imbalance between the value of goods and services produced and the value ultimately consumed is removed by including the item 'GST on production' in the GDP account. This item produces a measure of the amount of GST included in the valuation of the final demand categories. Note that not all purchases by tourists attract GST, for example, airfares purchased abroad by international tourists.

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.

Net capital stock

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

Output

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

Producer prices

The amount receivable by the producer from the purchaser for a unit of goods or a service produced as output less any deductible taxes invoiced to the purchaser. The producer price excludes any transport charges invoiced separately by the producer.

Purchaser prices (market prices)

The amount paid by the purchaser, exclusive of any deductible taxes, to take delivery of goods or services at the time and place required by the purchaser. The purchaser price of goods includes any transport charges paid separately by the purchaser to take delivery at the required time and place.

Subsidies

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

Taxes on production and imports

Taxes assessed on producers in respect of the production, sale, purchase, and use of goods and services, and that add to the market prices of those goods and services. This includes sales tax, local authority rates, import and excise duties, fringe benefits tax, and 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

ANZSIC: Australian and New Zealand Standard Industrial Classification

BoP: balance of payments

CPI: consumers price index

DTS: Domestic Travel Survey

GDP: gross domestic product

GST: goods and services tax

HTEE: Household Tourism Expenditure Estimates

IVS: International Visitor Survey

LEED: Linked Employer-Employee Data

MBIE: Ministry of Business, Innovation and Employment

NZSNA: New Zealand System of National Accounts

OECD: Organisation for Economic Co-operation and Development

TSA: tourism satellite account

UNWTO: United Nations World Tourism Organization



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