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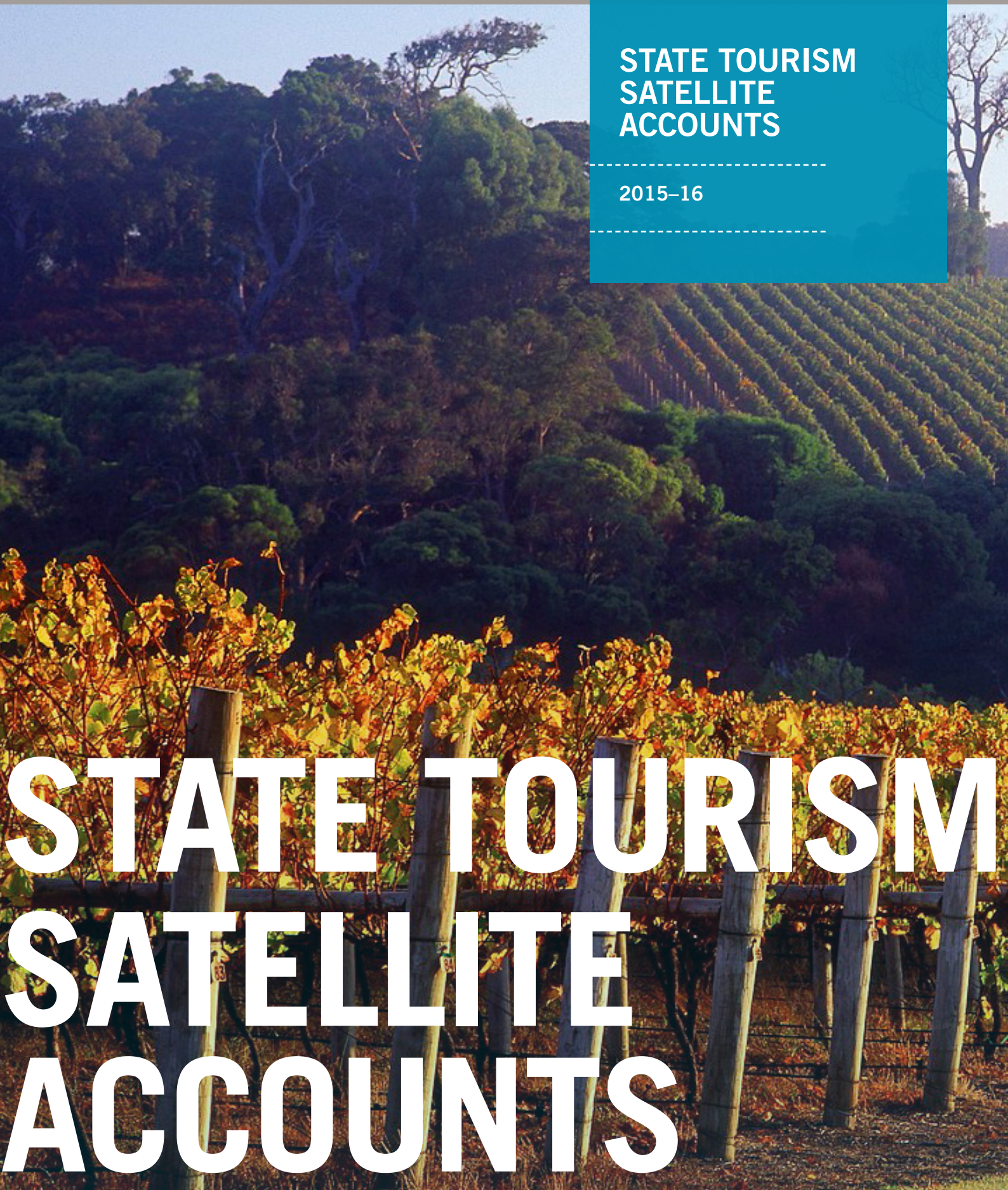
TOURISM
RESEARCH
AUSTRALIA

STATE TOURISM SATELLITE ACCOUNTS

2015–16



STATE TOURISM SATELLITE ACCOUNTS

ACKNOWLEDGMENTS

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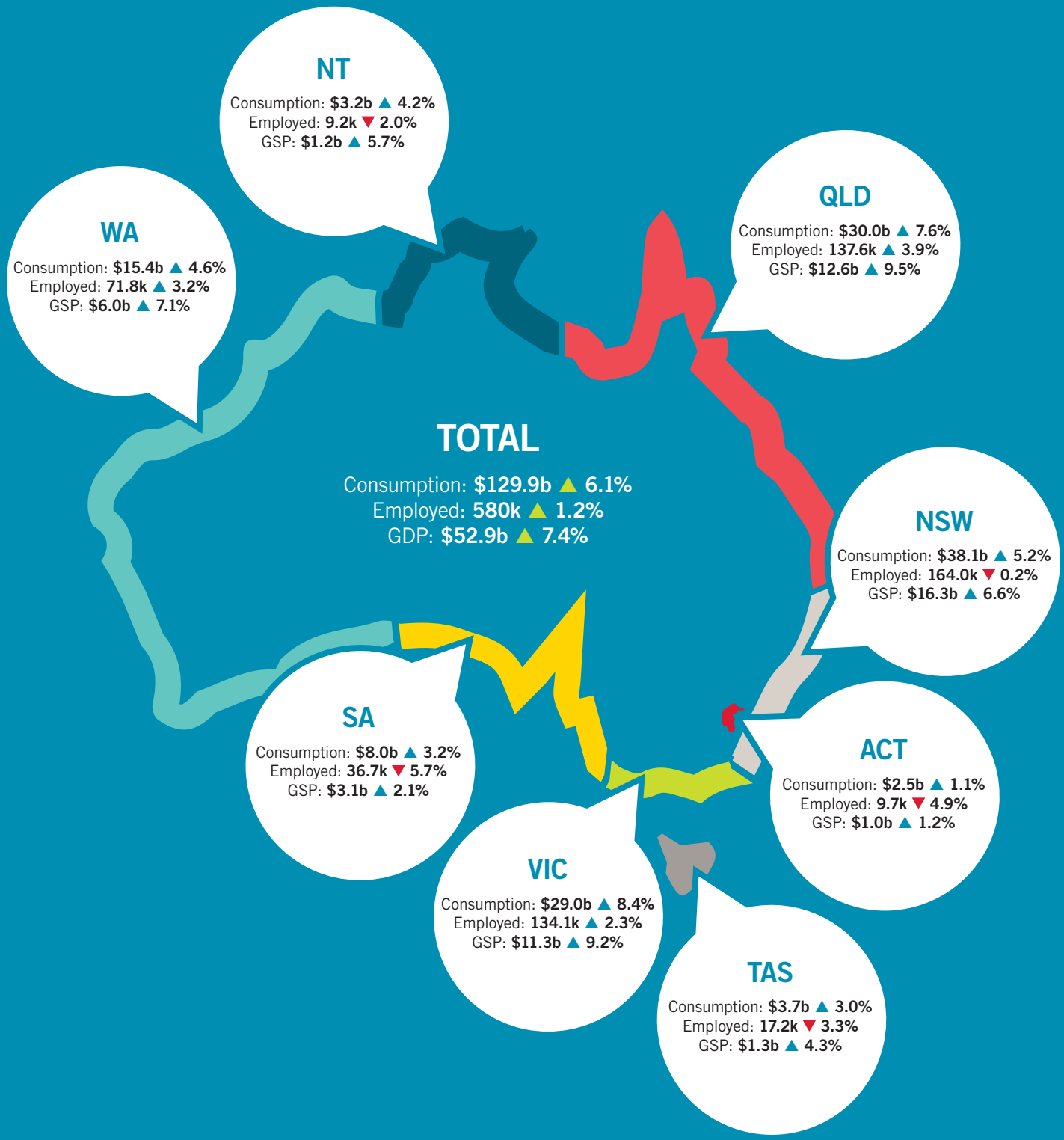


INTRODUCTION

THE IMPORTANCE OF TOURISM

Tourism is a major export earner for Australia, a source of employment for hundreds of thousands of workers and a key driver of growth in the economy. Unlike many other industries that are concentrated in geographic pockets, the benefits of tourism are widespread, with almost half of all expenditure going into regional Australia.

With the resources boom now well behind us, tourism has the potential to be Australia's fastest growing industry. Tourism Research Australia (TRA) forecasts show that international arrivals will likely grow by 48% in 2024–25 compared to 2016–17. Domestic travel is forecast to grow by 26% (overnight visitors) and 32% (day visitors) over the period 2016–17 to 2024–25.

The economic upside to tourism is substantial, nonetheless there are significant challenges to address, and opportunities to seize, in order to grow the industry in a sustainable way (Box 1).

BOX 1 – CHALLENGES AND OPPORTUNITIES FOR TOURISM

Australia is well placed geographically to take advantage of the growth of Asian middle-class populations, which are expected to increase five-fold over the next twenty years.

The global tourism market is, however, highly competitive, with more than 190 national tourism organisations competing for international visitors. Activity within the industry is also highly vulnerable to international events, economic uncertainties and levels of traveller risk – both real and perceived. Nevertheless, with its economic and political stability, Australia is able to provide a safe and secure environment for investors, operators and travellers.

To ensure that Australia continues to remain an attractive destination for overseas visitors, and to keep pace with forecast increases in demand, continued (and greater) investment in hotels, infrastructure, attractions and training is needed. For this reason, the Australian Government and industry implemented **Tourism 2020** – a strategy to grow the industry, and is currently developing a new strategy to plan for sustainable growth beyond 2020.

ABOUT THIS REPORT

The *State Tourism Satellite Accounts* (State TSA) report highlights the importance of tourism to each state and territory's economy by presenting a comprehensive set of tourism data for all states and territories in Australia. The report examines the changing pattern of tourism over the period 2006–07 to 2015–16, and the key changes that occurred in 2015–16. At an Australia-wide level, estimates from this report are consistent with the nationally-based Tourism Satellite Accounts produced by the Australian Bureau of Statistics (ABS) each year.

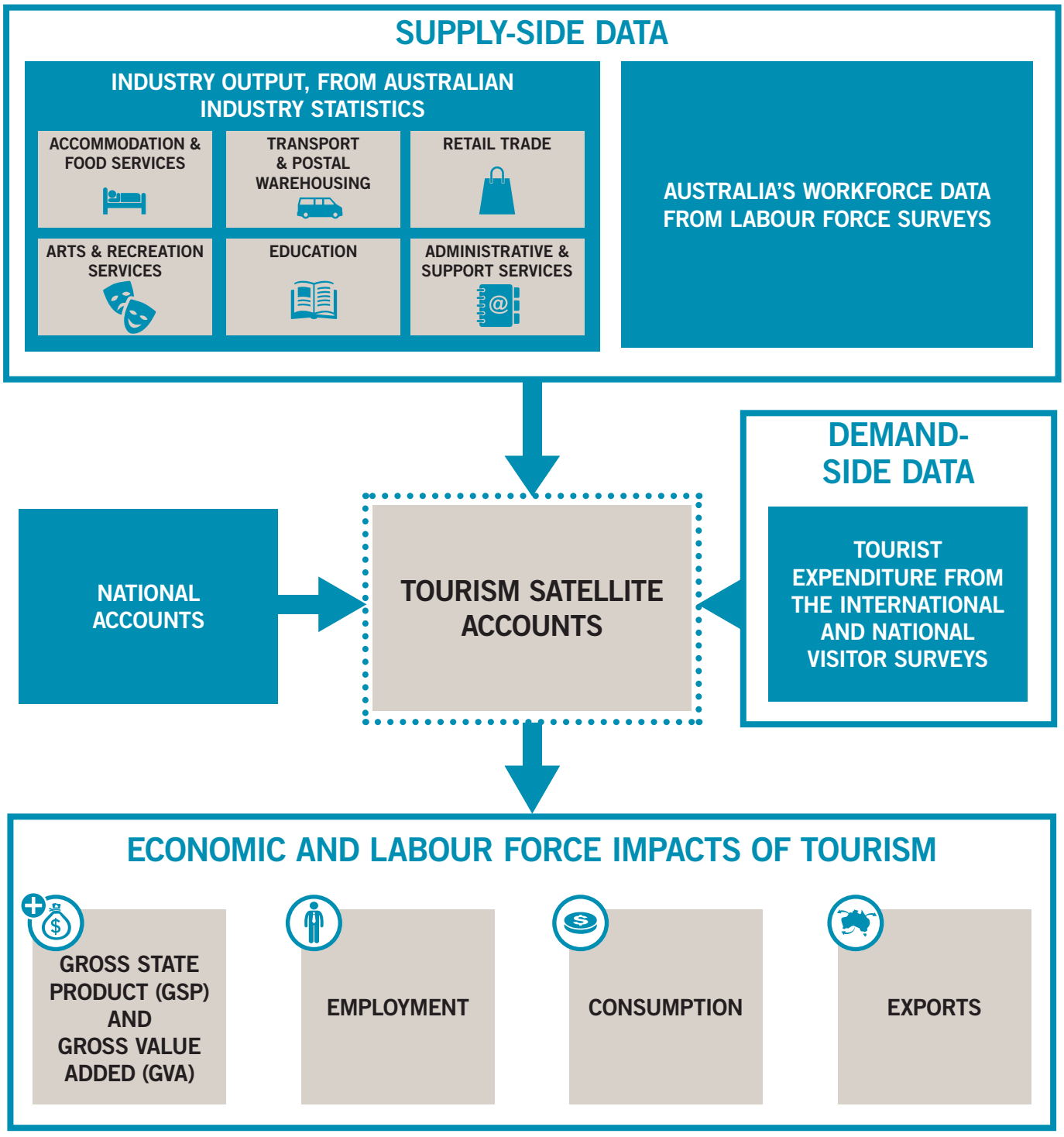
Data in the State TSA are reliant on a range of other statistics, which are subject to revision from time to time. In particular, this year's report reflects the backcasting of the National Visitor Survey (NVS), brought about by improvements in sampling methodology, and which led to substantial revisions in 2014–15 State TSA data. As a consequence of this and other revisions, historical data from this report will differ from previous editions. More information on these issues can be found in this report's Explanatory Notes.

HOW SATELLITE ACCOUNTS MEASURE TOURISM IMPACTS

State satellite accounts capture the relationship between the consumption of tourists in each state and territory and the ensuing economic and labour market impacts – both direct and indirect. These include Gross Domestic Product (GDP) at the national level, Gross State Product (GSP) at the state and territory level, Gross Value Added (GVA), exports, and employment. Underpinning these accounts is a framework built on international and domestic tourist expenditure (including day trippers), industry statistics, labour force statistics and national accounts data (Figure 1).

Image: Jacobs Creek Visitor Centre Garden, Barossa Valley, SA
Image courtesy of Tourism Australia

FIGURE 1 – THE STATE TSA FRAMEWORK

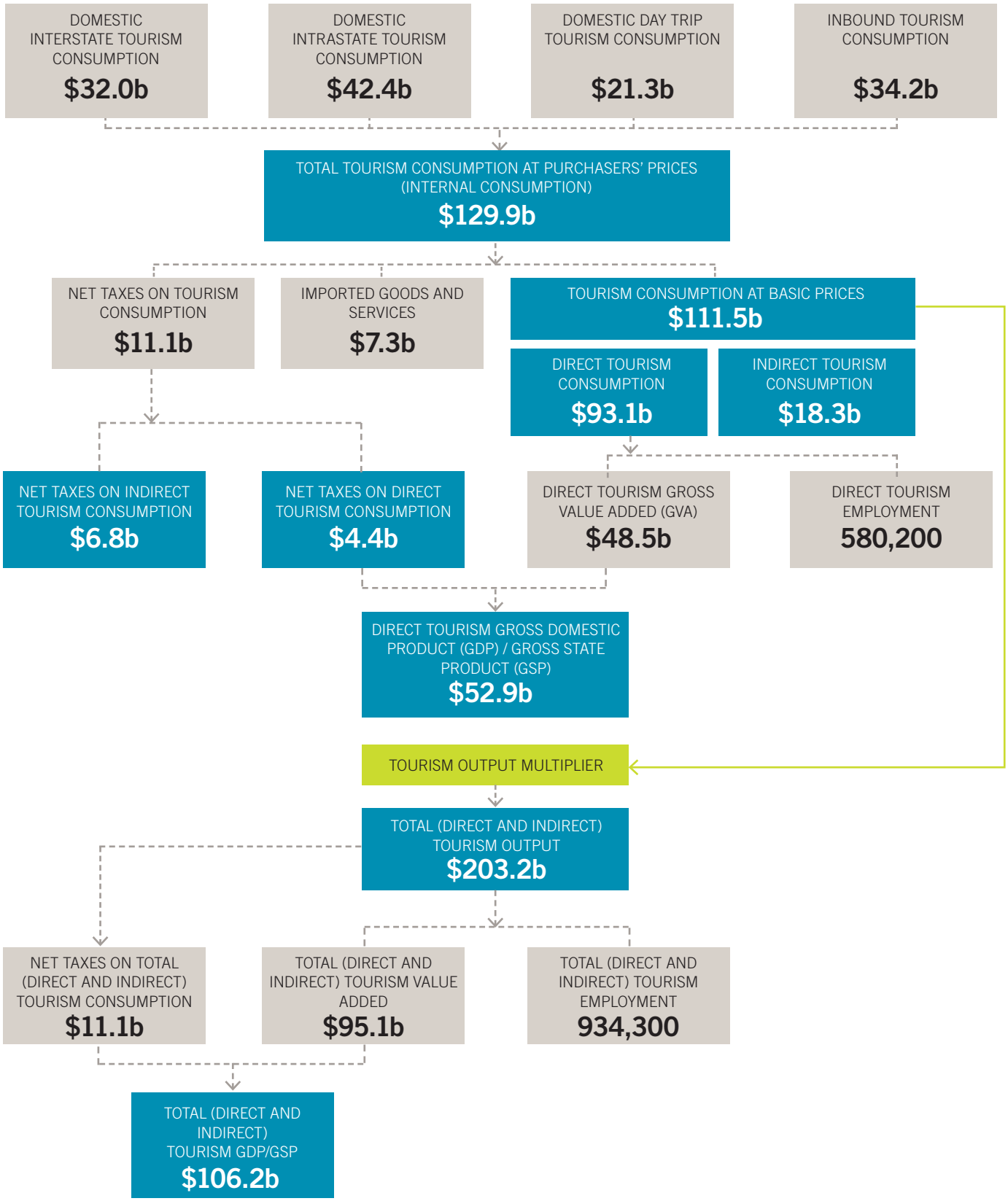


Measuring the indirect or flow-on effects of tourism is an important feature of the state satellite accounts, as it provides a more complete picture of the impacts of tourism. For example, purchasing a meal from a hotel will have a direct impact on Australia's accommodation and food services sector. Beyond that, there are also indirect impacts on the agricultural sector from growing the produce, on the transport sector from delivering the produce, and on the wholesale sector from selling the produce on to the hotel. Figure 2 shows how the different forms of tourism consumption contribute to the economy and labour market.

This example of direct and indirect effects illustrates how tourist consumption can cut across many different sectors of the Australian economy. However, this results in the tourism industry not fitting consistently within the conventional framework used to calculate measures of economic activity, such as the Australian System of National Accounts. For this reason, satellite accounts make extensive use of input-output tables for each state and territory to aggregate tourism-related contributions from different industries and compile a range of economic and labour market measures. See this report's Explanatory notes for more detail.

Image: Beerenberg Strawberry Farm 'Pick Your Own', Hahndorf, SA
Image courtesy of Tourism Australia

FIGURE 2 – IMPACTS OF TOURISM ON THE ECONOMY AND EMPLOYMENT IN 2015–16



TOURISM CONSUMPTION

NATIONAL RESULTS, 2015–16

Tourism consumption is the total value of goods and services consumed by domestic and international visitors in Australia[1]. It is measured in purchasers' prices – the price the visitors pay, including taxes, subsidies, and other mark-ups.

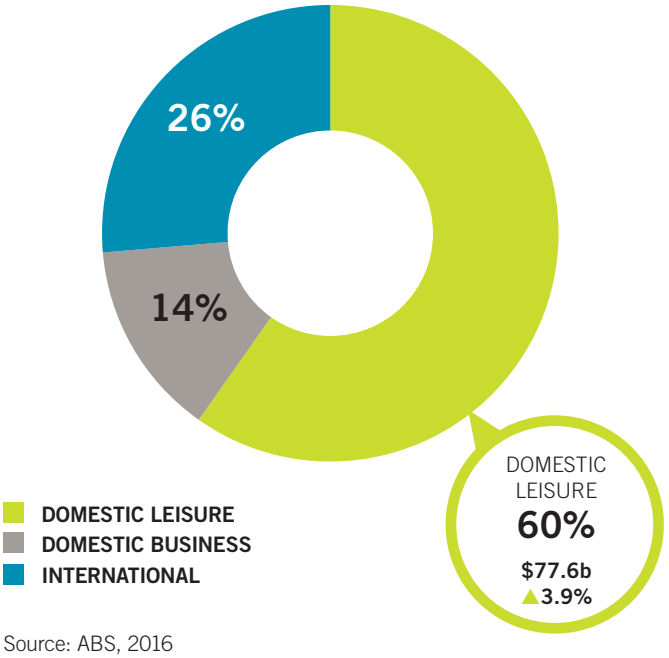
In 2015–16, total tourism consumption was $130 billion nationally[2], 6.1% higher than 2014–15. Of this, almost three-quarters (74%) came from domestic consumption, which increased 4.4% over 2014–15 to reach $96 billion for the year. The remaining 26% was by international visitors, with $34 billion worth of consumption in 2015–16, $3.4 billion more than in 2014–15.

Among domestic travellers, 22% of expenditure was from day trips ($21 billion) and 78% from overnight trips ($74 billion).

In terms of visitor type, 19% of domestic expenditure ($18 billion) was by business and government travellers, and the remaining 81% ($78 billion) came from Australian households.

Image: Wine Tasting at Penfolds Magill Estate, Adelaide, SA
Image courtesy of Tourism Australia

FIGURE 3 – CONSUMPTION EXPENDITURE BY VISITOR TYPE, 2015–16



Source: ABS, 2016

Although domestic consumption outweighs international consumption by almost three-to-one, the average international visitor consumed $4,361 in 2015–16, 1.0% more than the previous year. This was 13 times more than domestic travellers ($347, 4.5% lower than the previous year).

Expenditure by domestic travellers varies substantially between day trips and overnight trips, due to accommodation costs. Average spend per overnight trip was $837 in 2015–16, compared with $114 per average day trip. Figure 4 shows total international and domestic expenditure on tourism products in 2015–16.

Aside from differences in the amount of spend, there are substantial variations in expenditure patterns between domestic and international tourists.

For every dollar spent by international visitors, 14 cents was spent on accommodation, 17 cents on long-distance transport, 14 cents on shopping and 12 cents on takeaway and restaurant meals.

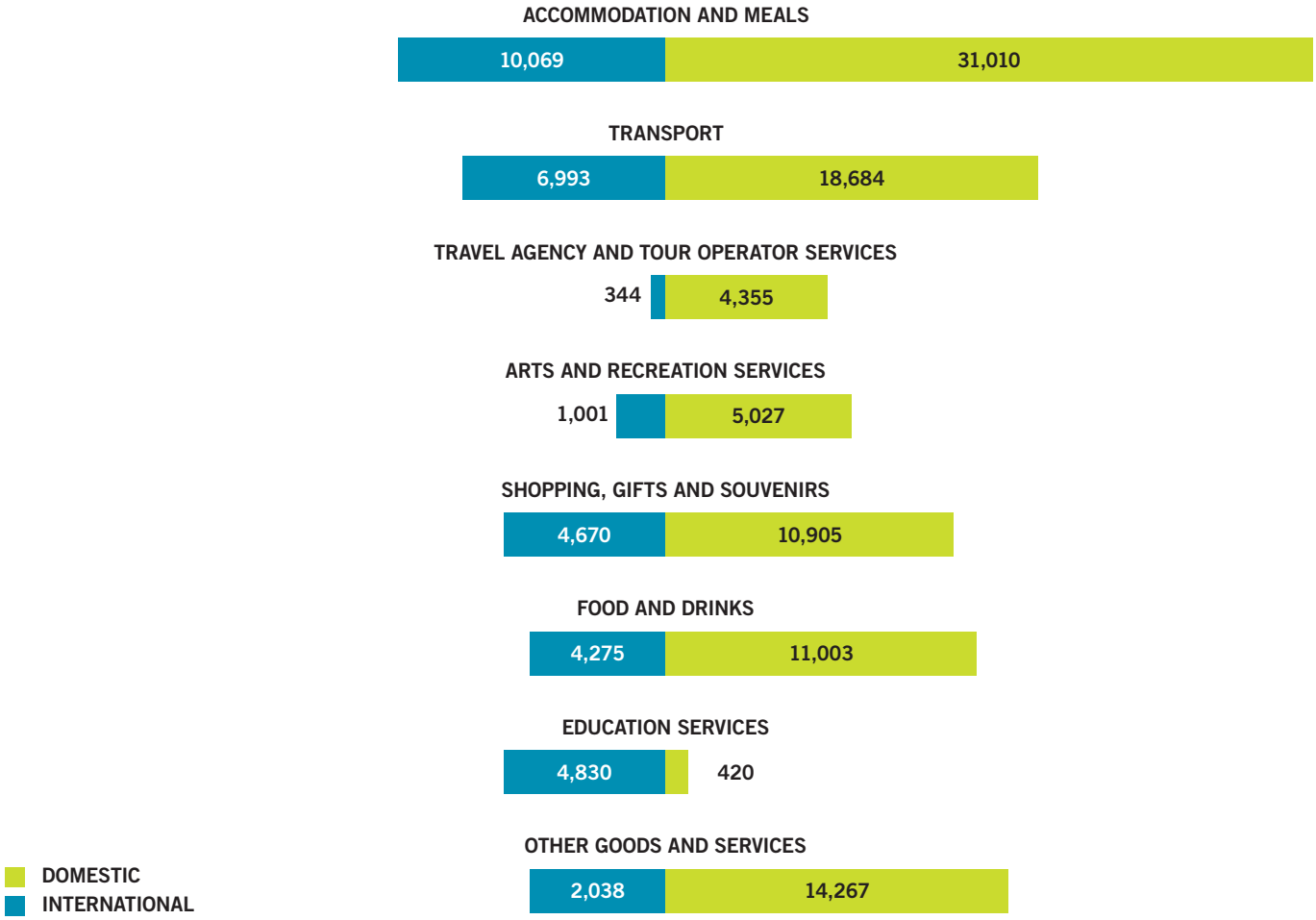
International visitors are the main consumers of Education services, with almost $5 billion spent in 2015–16. This was equivalent to 14 cents in every dollar going on education services, with demand especially high from Asian markets.

Among domestic travellers, the main items of expenditure in 2015–16 were eating out, long-distance passenger transport and shopping – accounting for 17, 16 and 11 cents of every dollar spent.

1 This also includes imputed non-market transactions such as the estimated rental value of accommodation in self-owned holiday homes; the cost to households of food and alcohol in hosting visiting friends and relatives; and non-market services provided by governments, such as entry to museums and galleries.

2 This release of the State TSA continues to report data in nominal terms (i.e. not adjusted for inflation).

FIGURE 4 – VISITOR CONSUMPTION EXPENDITURE ON TOURISM PRODUCTS ($ MILLION), 2015–16

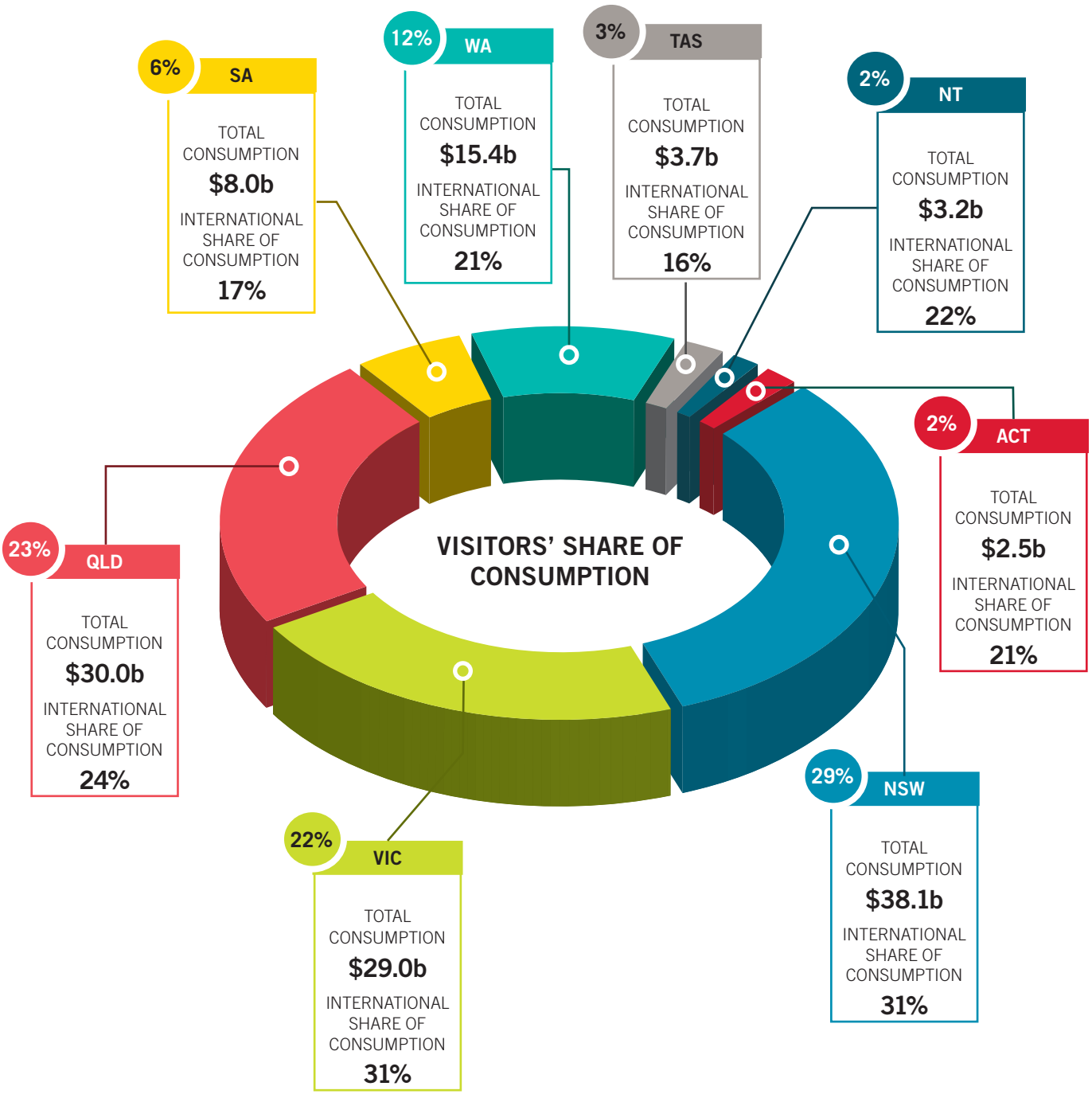


Source: ABS, 2016

STATE AND TERRITORY RESULTS, 2015–16

New South Wales, Queensland and Victoria contributed nearly three-quarters to total tourism consumption, while over the same period, the combined share of the remaining states/territories was around 25%. International travel's share of total tourism consumption was lowest for Tasmania and South Australia and greatest for New South Wales and Victoria (Figure 5).

FIGURE 5 – STATE AND TERRITORY SHARE OF AUSTRALIA'S TOTAL TOURISM EXPENDITURE, 2015–16



Source: Derived by TRA

Between 2006–07 and 2015–16, the contribution – and thus relative importance – of international tourism to total consumption increased in the following states and territories:

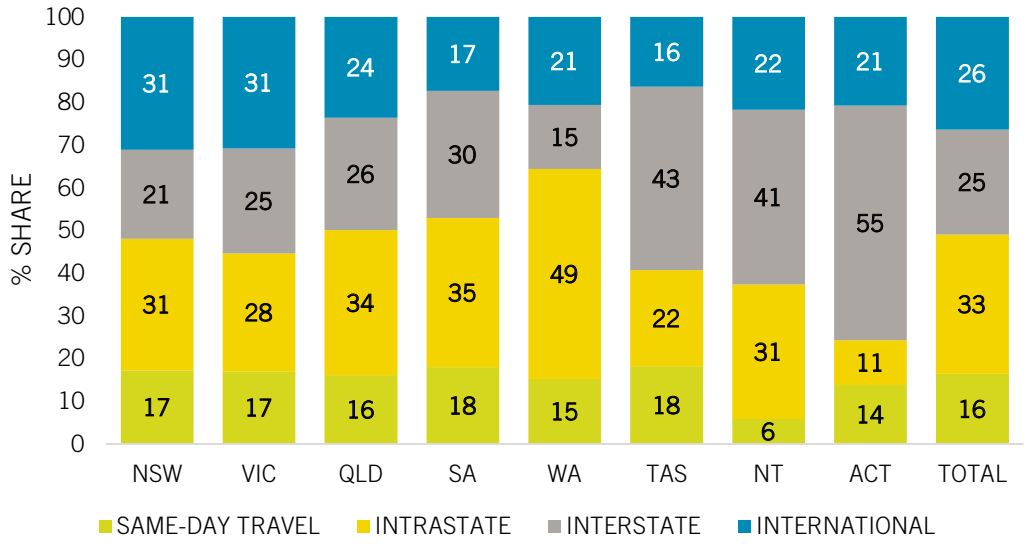
- Victoria: 31%, up from 23%
- New South Wales: 31%, up from 27%
- Australian Capital Territory: 21%, up from 16%
- South Australia: 17%, up from 14%
- Tasmania: 16%, up from 15%.

For all others states and territories, the share of consumption attributable to international tourism fell between 2006–07 and 2015–16 or remained the same:

- Queensland: 24% (unchanged)
- Northern Territory: 22%, down from 29%
- Western Australia: 21%, down from 23%.

Figure 6 compares more detailed data on domestic consumption in states and territories with international consumption for 2015–16.

FIGURE 6 – STATE AND TERRITORY SHARE OF TOTAL CONSUMPTION BY VISITOR TYPE, 2015–16



Sources: TRA's estimates (for states/territories) and ABS (2016) (for Australia)

TOURISM'S ECONOMIC CONTRIBUTION

TOURISM GROSS VALUE ADDED

By excluding payments made through the taxation system, Gross Value Added (GVA) is a more accurate indicator of tourism's contribution to Australia's economy than Gross Domestic Product (GDP). Using this measure, direct tourism GVA increased 7.5% (or $3.4 billion) to $49 billion in current price terms in 2015–16. This represented 3.1% of national GVA, which places tourism ahead of Agriculture, Forestry and Fishing, which captured a 2.6% share of national GVA.

International tourism contributed $15.1 billion to tourism GVA – an increase of $1.6 billion on 2014–15, and a 31% share of all GVA. The remaining 69% share ($33 billion) was from domestic travel, comprising:

- Intrastate travel – $15.7 billion, $0.7 billion more than 2014–15
- Interstate travel – $12.0 billion, $0.6 billion more than 2014–15
- Same-day travel – $5.8 billion, $0.5 billion more than 2014–15.

Domestic travel makes a larger contribution to GVA than international tourism in all states and territories. The dominance of this contribution ranges from a 63% and 65% share for Victoria and New South Wales, through to a 78% and 80% share for South Australia and Tasmania. Figure 7 shows the value of the domestic component of tourism GVA, and growth in domestic GVA since 2014–15.

Within the domestic sector, the share of GVA attributable to:

- interstate travel was highest for the Australian Capital Territory (68%), Tasmania (53%) and the Northern Territory (52%), and lowest for New South Wales (34%) and Western Australia (21%)
- intrastate travel was highest for Western Australia (63%), Queensland (47%), and New South Wales (47%), and lowest for Tasmania (32%) and the Australian Capital Territory (18%)
- same-day travel was highest for New South Wales (20%), and Victoria (19%), and lowest for the Australian Capital Territory (14%) and the Northern Territory (6%).

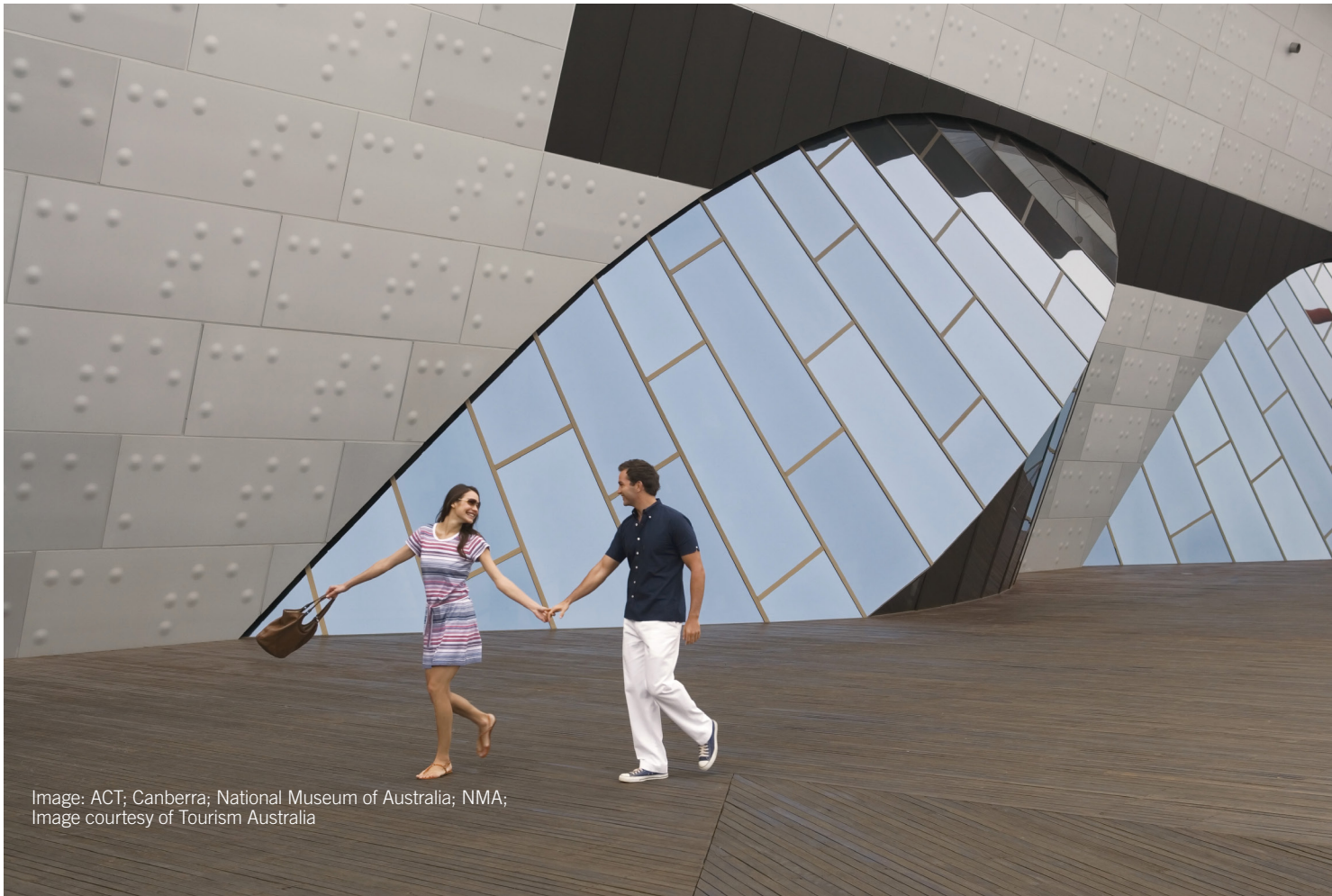
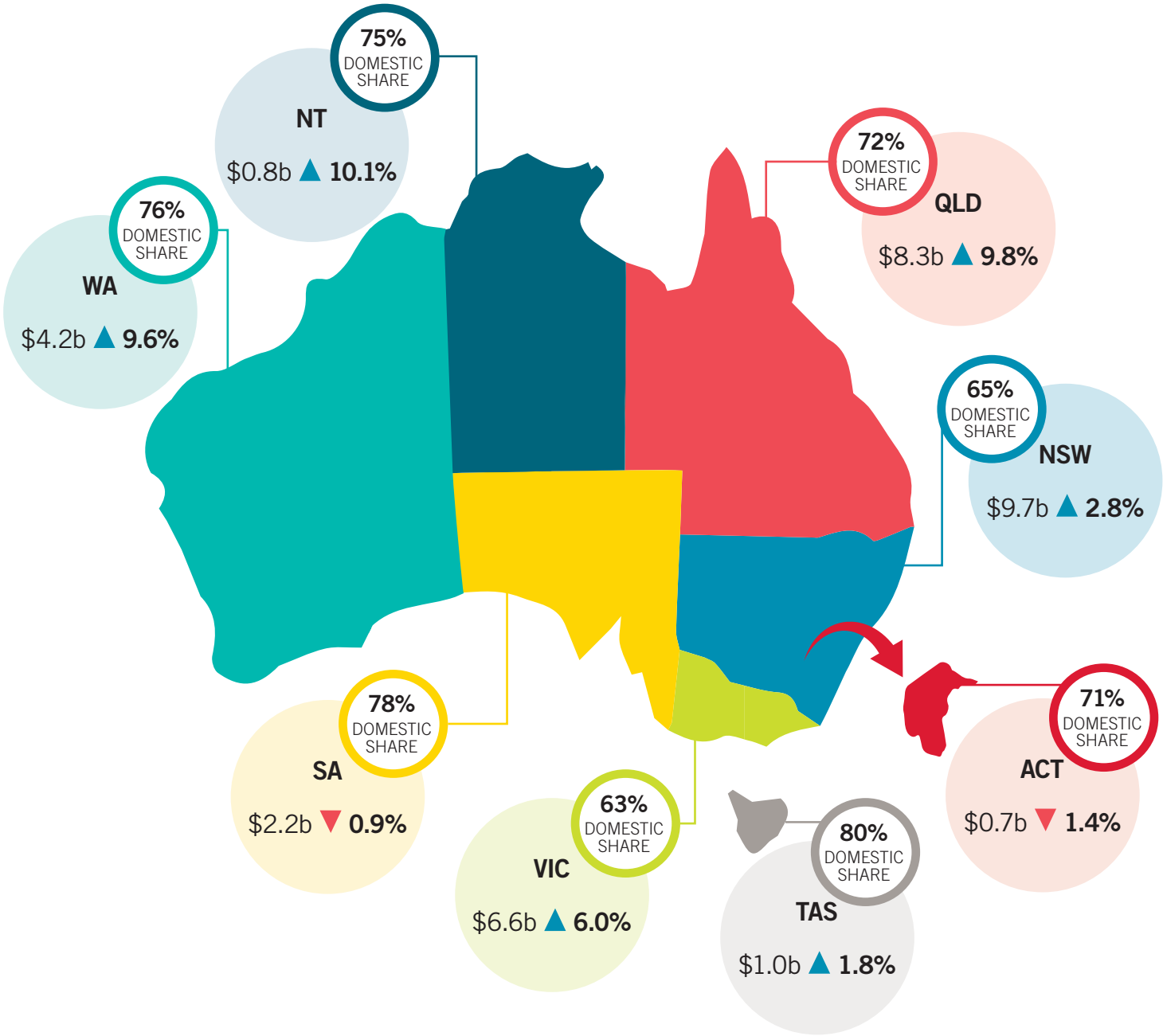


Image: ACT; Canberra; National Museum of Australia; NMA;
Image courtesy of Tourism Australia

FIGURE 7 – DOMESTIC TOURISM GVA BY STATE AND TERRITORY IN 2015–16 AND CHANGE ON 2014–15



Sources: TRA's estimates (for states/territories) and ABS (2016) (for Australia)

Total direct tourism GVA contributed most to total state GVA in Tasmania (4.9%), the Northern Territory (5.0%), and Queensland (3.8%) in 2015–16. For other states and territories, New South Wales, Victoria and South Australia reported that tourism held a 3.0% share of total GVA, while for the Australian Capital Territory and Western Australia, respective shares were 2.6% and 2.4%.

Between 2006–07 and 2015–16, tourism's direct share of total state GVA increased slightly from 3.0% to 3.1%, with most states and territories reporting a growing share of GVA attributable to tourism. The one significant exception to this was the Northern Territory, which reported a fall in share from 6.8% to 5.0%. (Figure 8).

INDIRECT TOURISM GVA, 2015–16

Indirect tourism GVA contributed a further $47 billion to national GVA. Combined with direct tourism GVA, this represented total GVA from tourism of $95 billion, or 6.1% of Australia's total GVA. Between 2006–07 and 2015–16, the contribution of indirect tourism GVA to total tourism GVA reduced slightly from 52% to 49%.

The states that contributed most to indirect tourism GVA in 2015–16 were:

- New South Wales $14 billion (a 30% share)
- Queensland $11 billion (24%)
- Victoria $10 billion (22%).

Collectively, these three states contributed more than three-quarters (76%) of all indirect GVA.

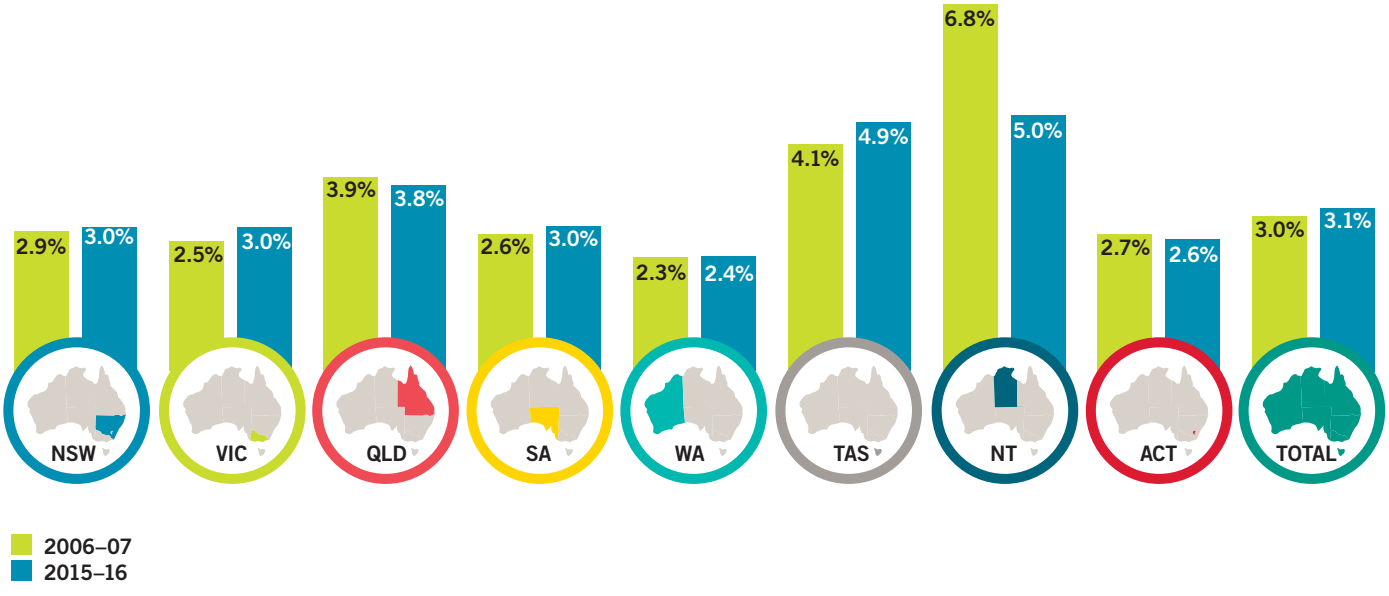
TOURISM GROSS DOMESTIC PRODUCT

Direct tourism Gross Domestic Product (GDP) and Gross State Product (GSP) measure the value added of the tourism industry at purchasers' (market) prices – unlike GVA, they include taxes paid, less subsidies.

Over the period 2006–07 to 2015–16, direct tourism GDP and GVA each increased more than 4% on average per year, with growth accelerating in recent years. As a result, there has been a slight increase in the direct tourism share of national GVA and GDP totals. A similar increase in shares can be identified when indirect effects are considered as well (Table 1).

The growth in tourism's share of economic activity can be attributed in part to weaker growth in some non-tourism related industries that benefited most during the resources boom. These industries included *Mining; Electricity, gas, water and Waste Water Services; and Professional, scientific and technical services.*

FIGURE 8 – TOURISM'S SHARE OF GVA ACROSS STATE AND TERRITORY ECONOMIES



Sources: TRA's estimates (for states/territories) and ABS (2016) (for Australia)

TABLE 1 – TOURISM'S SHARE OF NATIONAL GVA AND GDP

	2011–12	2012–13	2013–14	2014–15	2015–16	Average
	% share					
DIRECT EFFECTS OF TOURISM						
GVA share[a]	2.8	2.8	2.8	3.0	3.1	**2.9**
GDP share[a]	2.8	2.9	2.8	3.0	3.2	**3.0**
Employment share[a]	4.9	4.9	4.8	4.9	4.9	**4.9**
DIRECT AND INDIRECT EFFECTS OF TOURISM						
GVA share[b]	5.5	5.6	5.6	5.9	6.1	**5.8**
GDP share[b]	5.9	5.9	5.9	6.1	6.4	**6.1**
Employment share[b]	7.6	7.7	7.6	7.8	7.9	**7.7**

Sources: [a] ABS (2016); [b] TRA's estimates

TOURISM EMPLOYMENT

Tourism continues to be a significant direct and indirect employer. In 2015–16, tourism directly employed 4.9% of all workers in the economy – 580,200 tourism workers in total, and 6,700 more than were employed in 2014–15. When indirect effects are included, tourism's share of national employment increases to 7.9%, or 934,300 workers – an increase of 28,200 on the 2014–15 employment figure of 906,100 workers (Figure 10).

Tourism's 7.9% share of national employment is 0.1 percentage points higher than the percentage share reported in 2014–15, and above the long-term average share of 7.6% since 2006–07.

Between 2006–07 and 2015–16, tourism employment has grown as follows:

- Direct employment has increased from 529,900 to 580,200 – an average annual increase of 1.0%.
- Indirect employment has increased from 259,200 to 354,100 – an average annual increase of 3.5%.
- Total employment has increased from 789,100 to 934,300 – an average annual increase of 1.9%.

The states that contributed most to the total number of persons employed directly in tourism in 2015–16 were:

- New South Wales 164,000 persons (a 28% share of direct tourism employment)
- Queensland 137,600 (24%)
- Victoria 134,000 (23%).

These three states also made the largest contribution to indirect employment:

- New South Wales 97,200 persons (a 27% share of indirect tourism employment)
- Queensland 87,700 (25%)
- Victoria 74,200 (21%).

Collectively, these three states accounted for 75% of direct employment, 73% of indirect employment and 74% of total employment in the tourism industry.

TOTAL EMPLOYMENT (DIRECT AND INDIRECT)

Direct and indirect employment for other states and territories was as follows:

- Western Australia 108,700 persons (a 12.0% share of total tourism employment)
- South Australia 60,000 (6.4%)
- Tasmania 37,400 (4.0%)
- Northern Territory 17,300 (1.9%)
- Australian Capital Territory 16,000 (1.7%).

BOX 2 – UNDERSTANDING THE LEVEL OF GROWTH IN TOURISM EMPLOYMENT

A key finding from the ABS National Satellite Accounts data published in December 2016 was that in 2015–16, tourism employment increased by 1.2% – or about 6,700 people. Over the same period, the rate of growth for the Australian workforce was 2.0%. The slower rate of tourism jobs growth occurred even though the National Satellite Accounts showed that tourism GVA (GDP less taxes) was up 7.5% from $45.2 billion to $48.5 billion and that consumption was also up 6.1% from $122.4 billion to $129.9 billion.

Some of the reasons for this difference are that the employment effects of tourism are not measured directly, but are modelled, depending on the following:

- How much **contributing industries** have grown. Aside from retail trade, which contributed positively to both tourism and total industry employment, the industries that are driving jobs growth in the total economy are in the Health and Administrative support services, and are not tourism-related industries.
- The effect of **tourism ratios**. For different sectors in the industry, different ratios apply, depending on how labour intensive the industry is. For example, every million dollars of additional GVA translates into 18 workers in cafes and food services, but only six long-distance transport workers.

There are also other factors affecting jobs growth, such as increased use of new technologies in tourism, for example online booking systems, and a high rate of part-time and casual work.

It is also not that unusual for jobs growth to be less than GVA growth. GVA has grown about four times faster than job numbers since 2001–02.

States and territories that have a below-average growth in GVA in 2015–16 will have a smaller share of national GVA. In an environment of subdued jobs growth, and under the Tourism Satellite Account (TSA) methodology, this will equate to a very low rate of jobs growth or negative growth. This issue may be exacerbated for some states and territories by what is going on in the wider economy for contributing industries. For example, employment in *Accommodation, Travel agency and tour operator services*, and *Air, water and other transport* all saw decreases at the national level. Under the TSA methodology, a jurisdiction that has an over-representation in these industries will be more affected.

FIGURE 9 – JOBS GROWTH VERSUS GVA GROWTH

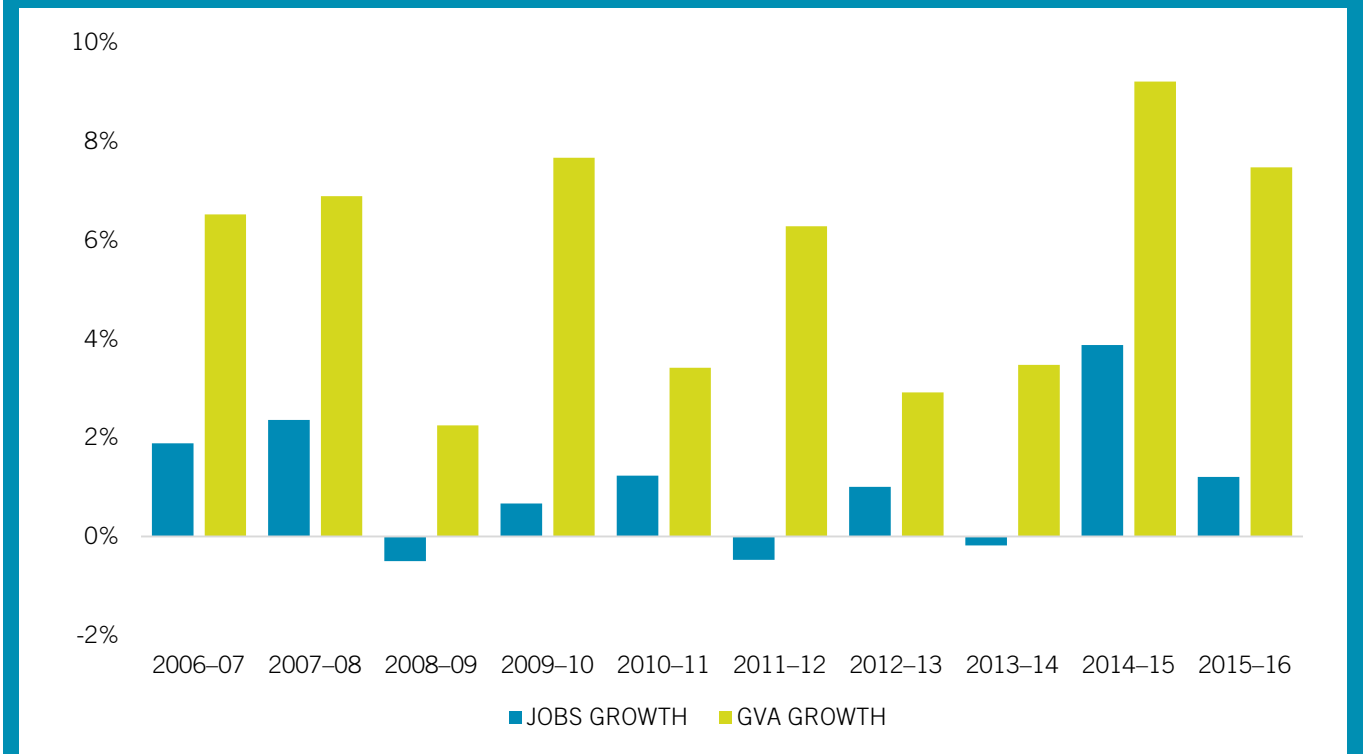
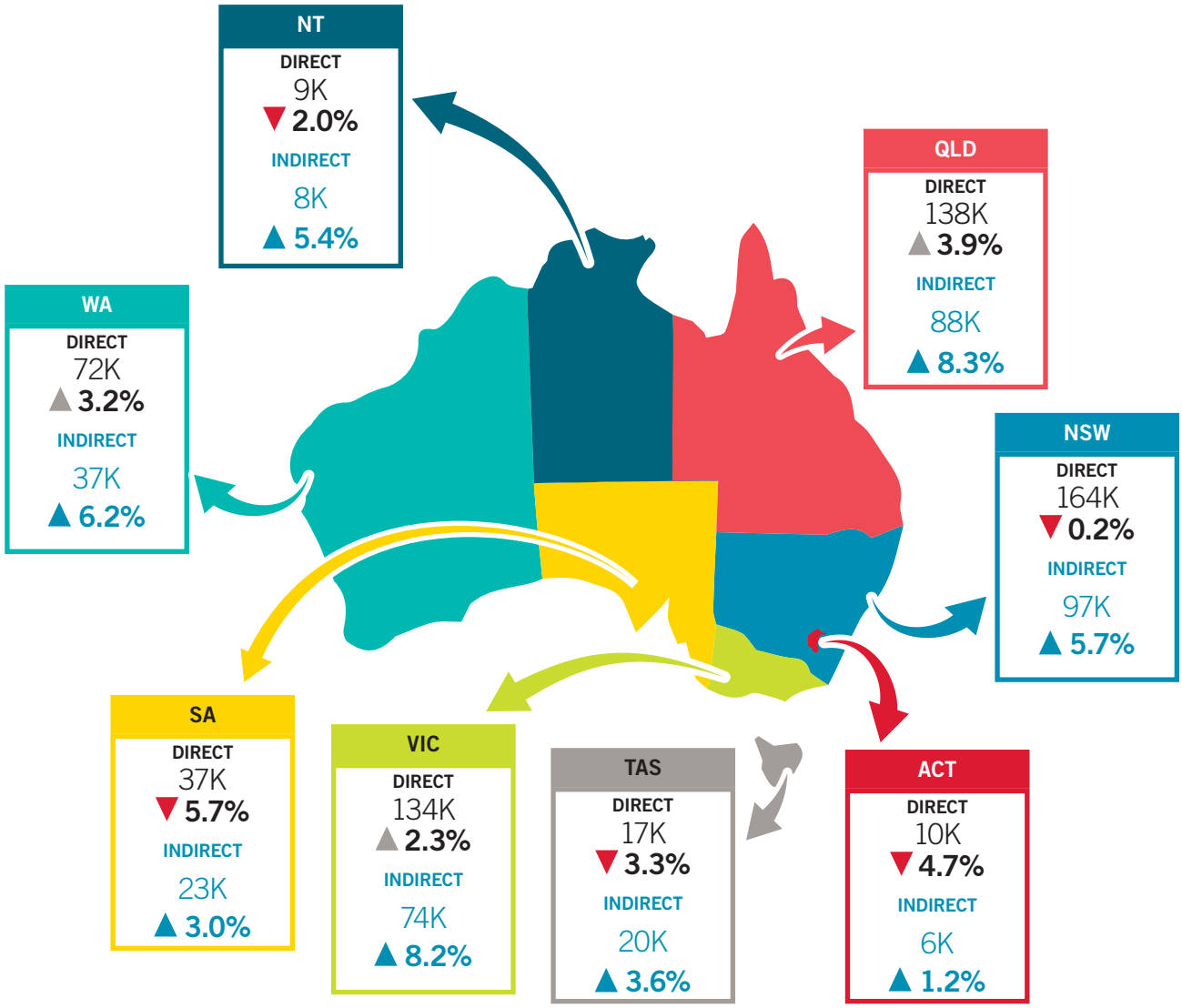


FIGURE 10 – DIRECT AND INDIRECT TOURISM EMPLOYMENT BY STATE AND TERRITORY IN 2015–16 AND CHANGE ON 2014–15



Sources: TRA's estimates (for states/territories) and ABS (2016) (for Australia)

Over the period 2006–07 to 2015–16, there was some movement in the share of direct tourism employment attributable to each state and territory.

The states that increased their share of national tourism employment over this period were:

- Victoria – growing from a 21% to 23% share, as direct employment increased from 109,800 to 134,100 workers
- Western Australia – growing from an 11% to 12% share, as employment increased from 56,500 to 71,800 workers.

States that *decreased* their share of national employment over the same period were:

- Queensland – the share fell from 26% to 24%, while direct employment fell from 139,100 to 137,600 workers
- New South Wales – while direct employment increased from 155,800 to 164,000 workers, the share fell from 29% to 28%.

Other states and territories maintained their employment shares over this period:

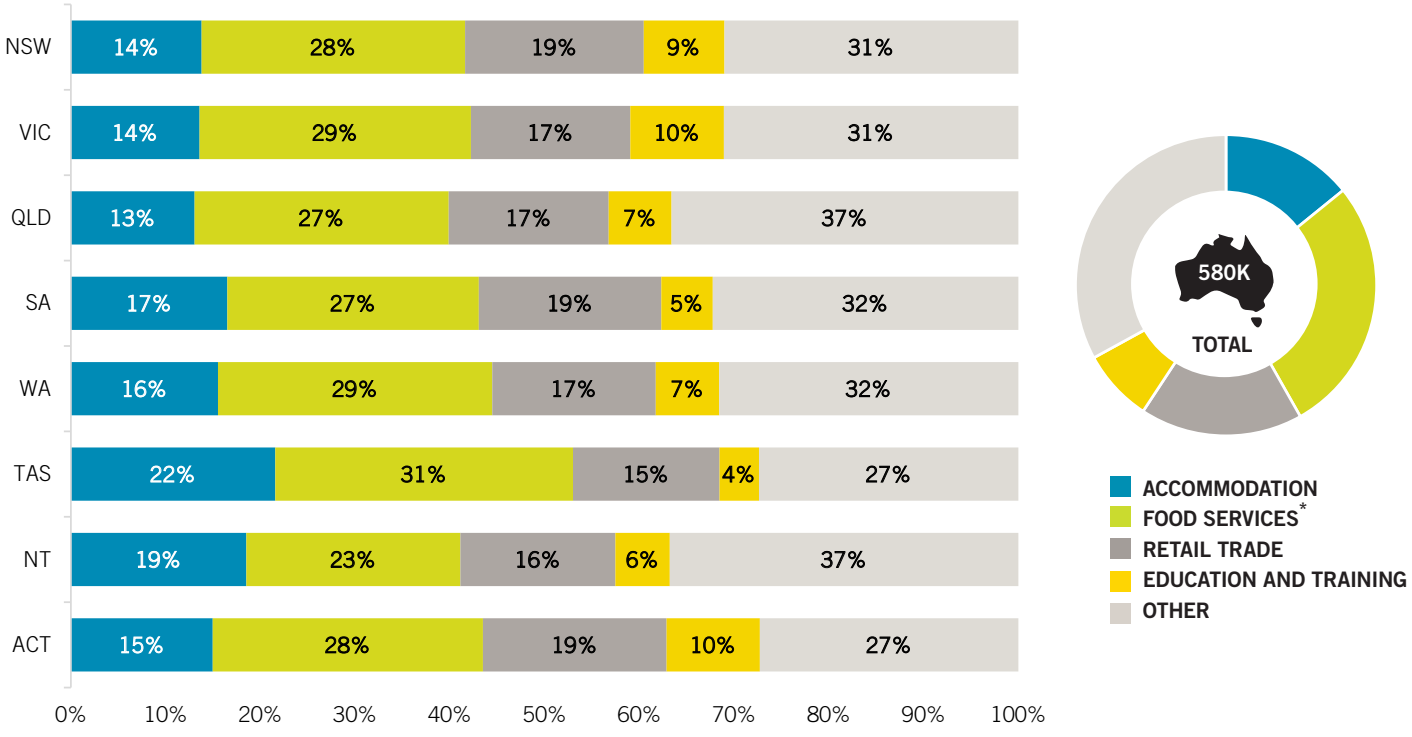
- Tasmania employment grew from 16,800 to 17,200 workers – a 3% share
- Northern Territory employment declined from 10,700 to 9,200 workers – a 2% share
- Australian Capital Territory employment grew from 8,900 to 9,700 workers – a 2% share.

Industries that contributed most to direct tourism employment across each state and territory in 2015–16 were:

- Food services – a 23% to 31% share of total employment
- Retail trade – a 15% to 19% share of total employment
- Accommodation – a 13% to 22% share of total employment
- Education and training – a 4% to 10% share of total employment.

Figure 11 provides more detailed information on these state and territory breakdowns.

FIGURE 11 – INDUSTRY CONTRIBUTIONS BY STATE AND TERRITORY, 2015–16



Sources: TRA's estimates (for states/territories) and ABS (2016) (for Australia)

*Refers to cafes, restaurants and take-away food services

Image: High Country Harvest Festival, Victoria
Image courtesy of Tourism Australia

EXPLANATORY NOTES

CHANGES TO THIS ISSUE

There are some changes to the inputs used to produce the 2015–16 State Tourism Satellite Accounts (State TSA). These are a result of changes in Tourism Research Australia (TRA) inputs and changes in ABS inputs.

CHANGES IN TRA INPUTS

As a result of improvements in the sampling methodology for the National Visitor Survey (NVS), inputs from the survey into the satellite account for 2014–15 were backcast by TRA. A consequence of this is that estimates for 2014–15 in this report will differ from last year's satellite reports. More information on the effects of this backcasting is in the next section of this report. A complete explanation of the backcasts process can be found on the TRA website.

TRA has used 2013–14 input-output tables to produce updated estimates, dating back to 2006–07, for indirect employment, indirect GVA and indirect GDP related to tourism. The 2014–15 state TSA report was based on the 2012–13 input-output tables.

CHANGES IN ABS INPUTS

Estimates of tourism consumption have been revised following adjustments to supply-side data that is used to replace TRA survey data for some products, e.g. international airfares, purchase of motor vehicles, actual and imputed rent on holiday homes, and international education fees.

Discrepancies between demand and supply-side data in the 2012–13 and 2009–10 benchmarks highlighted the need for adjustments to some tourism consumption and output estimates.

Estimates of domestic tourism consumption have also been revised due to current and previous adjustments to TRA's NVS estimates of outbound expenditure. These adjustments related to changes to the population benchmark data used for calculating estimates of outbound expenditure.

Estimates of international tourism consumption were also revised due to incorporating adjustments to TRA's International Visitor Survey (IVS). These adjustments are outlined in the 2013–14 TSA release. Revisions were incorporated between 2004–05 and 2009–10, and previously applied spliced growth rates post 2009–10 were removed and replaced with changes to level.

Revisions to the annual aggregate hours worked series in the ABS Labour Force Survey.

Revisions to employment data in the 2015–16 TSA to better account for seasonal effects.

THE EFFECTS OF BACKCASTING AND ABS REVISIONS ON STATE AND TERRITORY DATA

Due to improvements in the collection of data for the National Visitor Survey (NVS), survey datasets for 2014–15 and 2015–16 were backcast by Tourism Research Australia to more accurately reflect the visitor population. The ABS also made changes to its employment data (down from 580,800 jobs to 573,400 jobs) for 2014–15 to better account for seasonal effects.

The 2015–16 backcast NVS data has been used in the production of the 2015–16 data in this report.

The effect of the 2014–15 backcast was a redistribution of tourism expenditure across different jurisdictions in the National Visitor Survey. This, along with the ABS changes, contributed to a change in the distribution of employment and GVA for 2014–15 as shown below.

As the employment and GVA data for 2014–15 published in this report are based on more up to date information, it is recommended that they be used in preference to 2014–15 data reported in the State TSA 2014–15.

TABLE 2 – THE EFFECTS ON REVISIONS ON TOURISM INDICATORS, 2014–15

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL
Impact of revisions on GVA									
Original GVA ($m)	13,923	9,478	10,221	2,439	4,578	1,063	874	870	43,446
Revised GVA ($m)	14,028	9,575	10,516	2,775	5,139	1,160	1,051	911	45,156
Change ($m)	***105***	***98***	***295***	***336***	***561***	***97***	***177***	***41***	***1,710***
Original share of GVA	32.0%	21.8%	23.5%	5.6%	10.5%	2.4%	2.0%	2.0%	100.0%
Revised share of GVA	31.1%	21.2%	23.3%	6.1%	11.4%	2.6%	2.3%	2.0%	100.0%
Change (ppt)	***-1.0%***	***-0.6%***	***-0.2%***	***0.5%***	***0.8%***	***0.1%***	***0.3%***	***0.0%***	***0.0%***
Impact of revisions on employment									
Original employment ('000)	171.9	137.4	135.2	35.7	64.4	17.5	8.5	10.1	580.7
Revised employment ('000)	164.3	131.1	132.4	38.9	69.5	17.8	9.4	10.2	573.5
Change ('000)	***-7.6***	***-6.3***	***-2.8***	***3.2***	***5.1***	***0.3***	***0.8***	***0.0***	***-7.2***
Original share of employment	29.6%	23.7%	23.3%	6.1%	11.1%	3.0%	1.5%	1.7%	100.0%
Revised share of employment	28.6%	22.9%	23.1%	6.8%	12.1%	3.1%	1.6%	1.8%	100.0%
Change (ppt)	***-1.0%***	***-0.8%***	***-0.2%***	***0.6%***	***1.0%***	***0.1%***	***0.2%***	***0.0%***	***0.0%***

NOTES ON THE TSA CONCEPTUAL FRAMEWORK

The following organisations jointly developed the framework for the TSA:

- Commission of the European Communities
- Organisation for Economic Co-operation and Development (OECD)
- United Nations World Tourism Organization (UNWTO)
- World Travel and Tourism Council (WTTC).

The framework was approved by the United Nations Statistical Commission (EUROSTAT et al. 2000) and has been revised in UNWTO (2008) and *Tourism Satellite Accounts: Recommended Methodological Framework* (2008). The framework has been widely applied in Australia and internationally, so the recommended methodology for TSAs is not reproduced in this report.

METHODOLOGY AND DATA SOURCES

The 2015–16 State TSA publication builds on the ABS' national TSA to present a comprehensive set of data on the direct and indirect economic contribution of tourism for all states and territories. In doing so, the report highlights changes, in nominal terms, that have occurred in 2015–16 and examines longer-term patterns in tourism's contribution to the national and state and territory economies.

Although the tourism industry is a high value contributor to the Australian economy, the ABS System of National Accounts (SNA) does not capture tourism as a single industry because of the sector's diverse products and services. The TSA bridges this gap by measuring the economic contribution of tourism and effectively supplementing the SNA. By doing this, comparisons can be made between the tourism industry's economic contribution and that of conventional industries within an economy, or even between tourism sectors across different countries.

DIRECT CONTRIBUTION OF TOURISM

The approach that has been adopted to derive the direct contribution of tourism in the State TSA is similar to that developed by Pham et al. (2009). Essentially, tourism expenditure data and state/territory industry input-output (I-O) data are combined with the national TSA benchmark. This ensures both the supply of tourism and the demand for tourism at the state level are captured.

The main data sources are:

- unpublished modelled regional expenditure data from TRA's IVS and NVS
- the I-O database from The Enormous Regional Model (TERM) (Horridge, Madden & Wittwer, 2003)
- the national TSA produced by the Australian Bureau of Statistics (ABS, 2016).

Regional expenditure data are used to derive tourism consumption, or demand, in each state. The regional I-O database provides the cost structure and all required information to derive the supply side of the tourism sector in the State TSA.

The supply and demand elements of the State TSA data are then reconciled with the national TSA benchmark so that the summing conditions between state and national levels are satisfied. Reconciliation is required because the sum of state expenditure data is not equal to the national TSA produced by the ABS. The main reason for this difference is that the ABS makes an upward adjustment to tourism expenditure to derive the national TSA data. Unfortunately, the equivalent information necessary to apply an upward adjustment to the state tourism expenditure is not available. Importantly, the relativity of state differences captured from the regional I-O database and regional expenditure patterns is maintained when reconciling the State TSA data to the national target.

INDIRECT AND TOTAL CONTRIBUTION OF TOURISM

The indirect effects of tourism demand on businesses that provide goods and services to the tourism industry have also been measured. For example, the indirect tourism demand generated from supplying a meal to a visitor starts with the production of what the restaurant needs to make the meal, such as fresh produce and electricity for cooking.

This approach complements the direct effects presented through the TSA framework and provides a clearer picture of the total contribution of tourism to the economy. However, as the TSA framework is not designed to measure these indirect effects at state and territory level, they have been calculated using I-O analysis methods.

The I-O analysis methods provide a breakdown of the supply and demand of commodities in the Australian economy. As the tourism sector by nature does not have its own multiplier, the multipliers for other industries are used as the basis for calculating tourism's indirect effects. The multipliers measure the individual contribution of the industries associated with supplying goods and services to tourists and thus provide estimates of the flow-on effects for tourism output, tourism GVA, tourism GSP and tourism employment.

The equivalent state and territory output multipliers and state-specific industry level GVA to output and employment to output ratios have been derived from the TERM I-O database. This database is widely used in Australia, and is the only source available for this information at the state and territory level. It is based on 2004–05 data. The same state output multipliers and the associated ratios have been applied to all TSA years presented in this report.

REGIONAL EXPENDITURE

As indicated in the previous section, State TSA data are based on TRA *modelled regional expenditure estimates*, which were derived from IVS and NVS data. The survey data are allocated to tourism regions using an iterative procedure (TRA, 2013). Essentially, the technique takes into account visitors' reported expenditure on their entire trip in Australia, relative to the nights they spend in different tourism regions in Australia.

The estimates derived from the regional expenditure model show there are considerable differences in expenditure patterns across states and territories. As a key input to the State TSA, they are therefore an important contributor in shaping the patterns evident in the estimates of each state and territory and the shares attributed to specific tourism-characteristic and tourism-connected industries in each state and territory.

Importantly, it should be recognised that as the modelled regional expenditure figures are derived from survey data, there can be some volatility in these estimates. This is particularly the case for smaller states and territories and expenditure categories with lower levels of expenditure.

TOURISM CONSUMPTION AND OUTPUT

The modelled tourism expenditure estimates which are used as an input to the State TSA are measured at purchasers' prices. This includes the following components that are not directly related to industries producing goods and services for tourism purposes:

- imports
- wholesale, retail margins, and transports (margins)
- net commodity taxes.

Consumption represents the demand side of tourism, with visitors paying a final price for goods and services. Thus consumption in this report is generally measured in purchasers' prices (Tables 4 and 8) to reflect the full price paid by tourists for goods and services. Most consumption data in the national account and State TSA are presented in the same way.

However, in order to measure flow-on effects correctly, it is necessary to use consumption measured at basic prices. If consumption were measured at purchasers' prices, flow-on effects would be over-estimated by the inclusion of values (such as imports) which are not related directly to domestic production.

Tourism output measures how much demand is satisfied by domestic industries. Often, output is less than total consumption (at purchasers' prices) due to the amount of imports, commodity taxes and any associated margins that are required to facilitate the transfer of goods and services from producers to tourists. Road and rail transport and the wholesale and retail sectors are good examples of this. Only at basic prices is consumption equal to output of the producing industry, as all add-on components paid by the consumers are removed (noting the amounts of margins that are re-allocated to the applicable industries to reflect their contribution to tourism consumption explicitly).

It is also important to note that within the basic prices category, not all goods and services are now defined as direct output in the new TSA framework. As indicated previously, the output of an industry is defined as direct tourism output only when the industry has physical contact with tourists (for example, cafes, restaurants and accommodation). Items like fuel are not direct tourism outputs. For example, if a tourist spends $98 to fill up their petrol tank, and $80 is the cost of fuel and $18 is the cost to run the petrol station, then only $18 is recorded as direct tourism output associated with the retail industry. The remaining $80 is considered to be the cost to the retailer of the domestic good sold to tourists and would be captured in the flow-on effects to account for the value-adding that tourism has generated in the domestic economy.

GLOSSARY

Basic price: The amount receivable by the producer from the purchaser for a unit of a good or service prior to any additional costs such as net commodity taxes or any margins required to facilitate transfer of the goods and services from the producer to the tourists. These additional costs are paid by consumers but received by other industries (transport) and government (tax revenue).

Direct contribution of tourism: The contribution generated by transactions between the visitor and producer for a good or service that involves a direct physical or economic relationship. For example, the direct effects of an increase in the number of visitors staying in hotel accommodation are the sales and any associated changes in payments for wages and salaries, taxes and supplies and services. These direct economic impacts are measured according to the TSA framework throughout this report.

Employed person: A person aged 15 years or over who, during the reference week, worked for one hour or more for pay, profit, commission or payment in kind in a job or business or on a farm, or worked for one hour or more without pay in a family business or on a farm. Direct and indirect tourism employment are measured separately using the TSA framework and I-O modelling techniques respectively. Combined they provide an estimate of total tourism employment.

Indirect contribution of tourism: The subsequent or flow-on effects created by the requirement for inputs from those industries supplying goods and services to tourists. For example, in the case of the hotel industry this might include the fresh produce supplied to a hotel and the electricity used. These indirect economic impacts are measured using I-O modelling techniques in this report as the TSA framework is not designed to produce such estimates at the state and territory level.

International tourism: Overseas visitors to Australia who stay for a period of less than 12 months.

Interstate travel: Domestic overnight travel where a visitor travels to a state or territory other than that in which they reside.

Intrastate travel: Domestic overnight travel where a visitor travels to a location in the state or territory in which they reside.

Net taxes on products: The combined taxes or subsidies on a product, payable per unit of a good or service. These usually become payable when the product is sold or imported but these may also become payable in other circumstances such as when a good is exported.

Purchasers' prices: The amount payable by the purchaser (excluding any deductible tax) to take delivery of a unit of a good or service at the time and place they require it. This includes any transport charges paid separately to take delivery of the good or service.

Same-day travel: Domestic travel involving a round trip distance of at least 50 kilometres and at least four hours, and no nights spent away from home. Same-day travel as part of overnight travel is excluded, as is routine travel such as commuting between work or school and home.

Total contribution of tourism: The total contribution of tourism taking into account direct and indirect effects (see direct contribution of tourism and indirect contribution of tourism).

Tourism-characteristic industries: Industries that would either cease to exist in their present form or be significantly affected if tourism were to cease. Under the international TSA standards, core lists of tourism characteristic industries, based on the significance of their link to tourism in the worldwide context, are recommended to facilitate international comparison. The core list of tourism characteristic industries is consistent with the newly revised international classification of industries, namely the International Standard Industrial Classification, Revision 4 (ISIC Rev. 4), which aligns closely with ANZSIC 2006. In the Australian TSA, for an industry to be a country-specific tourism characteristic industry, at least 25% of its output must be consumed by visitors.

Tourism-characteristic products: Products that would either cease to exist in their present form or be significantly affected if tourism were to cease, or for which sales would be significantly reduced in the absence of tourism. Under the international TSA standards, core lists of tourism characteristic products, based on the significance of their link to tourism in the worldwide context, are recommended to facilitate international comparison. In the Australian TSA, for a product to be a country-specific tourism characteristic, at least 25% of the output of the product must be consumed by visitors.

Tourism-connected industries: Industries, other than tourism characteristic industries, for which a tourism-related product is directly identifiable (primary) and where the products are consumed by visitors in volumes which are significant for the visitor and/or the producer. All other industries are classified as 'all other industries', though some of their products may be consumed by visitors and are included in the calculation of direct tourism GVA and direct tourism GDP.

Tourism-connected products: Products that are consumed by visitors but are not considered as tourism characteristic products.

Tourism consumption: The total value of tourism goods and services consumed by residents and visitors from overseas in Australia. It includes household, business and government tourism consumption. It represents the price paid by the visitor (which therefore includes taxes and subsidies) and is measured in purchasers' prices.

Tourism gross state product: Tourism GVA plus net taxes on products that are attributable to the tourism industry. As such, it generally has a higher value than tourism GVA. Direct and indirect flow-on GSP are measured separately using the TSA framework and I-O modelling techniques, respectively. Combined, they provide an estimate of total tourism GSP.

Tourism gross value added: Considered the most accurate measure of the contribution of the industry to the economy. It includes the total labour income and capital revenue received by the industry and the net taxes that government receives from the production, and is measured in basic prices. Direct and indirect flow-on GVA are measured separately using the TSA framework and I-O modelling techniques, respectively. Combined, they provide an estimate of total tourism GVA.

Tourism output: The total value of goods and services produced in Australia to satisfy visitor consumption. It is measured in basic prices, so it excludes net taxes on tourism products. Direct and indirect flow-on outputs are measured separately using the TSA framework and I-O modelling techniques, respectively. Combined, they provide an estimate of total tourism output.

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