

**The economic and social contribution
of Qantas to Australia**

The Qantas Group

December 2019

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Executive summary

Deloitte Access Economics has measured the Qantas Group's contribution to the Australian economy in the 2018-19 (FY19) financial year and has found the following:

- Combining the direct and indirect economic contribution results, the total economic contribution of Qantas Group to the Australian economy was **55,312** full time equivalent (FTE) jobs and **\$12.8 billion** in value added for 2018-19.
- In addition to directly providing **25,394** FTE Australian jobs (27,969 in headcount terms), Qantas Group indirectly contributes an estimated **29,918** FTE Australian jobs by procuring **\$10.7 billion** in goods and services in Australia and overseas to meet its supply chain requirements.
- The overall economic contribution of Qantas Group has increased by **10.1%** since 2016-17 (or 4.9% p.a.) while total employment contribution has fallen by 2.0% (or 1.0% p.a.).
- The total economic contribution of the Qantas Group represents **0.7%** of Gross Domestic Product (GDP) in Australia. Considering solely the direct contribution, the operations of the Qantas Group represented **0.4%** of GDP.

Table i Economic contribution of the Qantas Group

| | Direct | Indirect | Total |
|--------------------------------------------|--------|----------|--------|
| Value added (\$b) | 7.3 | 5.5 | 12.8 |
| Employment (FTE) | 25,394 | 29,918 | 55,312 |
| Gross Operating Surplus (GOS) (\$b) | 3.1 | 2.7 | 5.8 |
| Labour income (\$b) | 4.2 | 2.8 | 7.0 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

In addition to the economic contribution associated with its operations, the Qantas Group plays a vital role in facilitating tourism activity through the transport of tourists to and around Australia. The Qantas Group also plays an important role in marketing Australian tourism both internationally and domestically, particularly through its contribution to state tourism agencies.

Combining the expenditure of both domestic and international tourists who travel on Qantas and Jetstar, the additional total value added to the Australian economy associated with the role of the Qantas Group in facilitating tourism in FY19 is estimated to be **\$13.1 billion** and this activity supports **106,005** FTE jobs.

- The direct facilitated tourism contribution of the Qantas Group to the Australian economy was **68,014** FTE jobs and **\$6.57 billion** in value added for 2018-19.
- In addition, the indirect facilitated tourism contribution was an estimated **37,991** FTE jobs and **\$6.55 billion** in value added.

Table ii Facilitated tourism contribution of the Qantas Group

| | Domestic | | | International | | |
|--------------------------|----------|---------|--------|---------------|---------|--------|
| | Qantas | Jetstar | Total | Qantas | Jetstar | Total |
| Value Added (\$m) | 5,230 | 3,237 | 8,467 | 3,304 | 1,352 | 4,656 |
| Employment (FTE) | 43,589 | 27,618 | 71,206 | 24,711 | 10,088 | 34,799 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

Contribution to regional Australia

The Qantas Group also makes a significant contribution to regional Australia. Regional Australia has been defined here to encompass all regions outside of the capital cities e.g. Sydney, Melbourne, Brisbane, Canberra, Hobart, Adelaide, Darwin and Perth.

Deloitte Access Economics estimates that the activities of the Qantas Group in regional Australia contributed **5,879 jobs** and **\$1.6 billion** in total value add in 2018-19.

- The Qantas Group operations in regional Australia directly contributes **\$789 million** in value added and indirectly contributes an additional **\$845 million** in value added.
- The Qantas Group directly provides **1,083 jobs** in regional Australia and indirectly supports an additional **4,797 jobs** in upstream industries such as catering and airport support staff.

The total economic contribution of operations by the Qantas Group constituted 0.3% of Gross Regional Product (GRP) in regional Australia.

The role of the Qantas Group in facilitating tourism activity in regional Australia was estimated to contribute **36,818 jobs** and **\$4.4 billion** in value added to regional Australia in 2018-19. This represents around 35% of Qantas Group tourism employment and 33% of value added.

- The tourism activity in regional Australia facilitated by the Qantas Group directly contributes **\$2.0 billion** in value added and indirectly contributes an additional **\$2.4 billion** in indirect value added.
- This facilitated tourism activity is estimated to directly provide **21,213 FTE jobs** in regional Australia and indirectly supports an additional **15,605 FTE jobs** in upstream industries such as agriculture.

The total economic contribution of tourism activity facilitated by the operations by the Qantas Group constituted 0.9% of Gross Regional Product in regional Australia.

Contribution to Northern Australia

Deloitte Access Economics also estimated the economic contribution of the activities of the Qantas Group in Northern Australia in FY19. Northern Australia is defined as all of the Northern Territory, and those Local Government Areas (LGAs) in Queensland and Western Australia above and intersecting the Tropic of Capricorn.

Deloitte Access Economics estimates that the activities of the Qantas Group in Northern Australia contributed **2,639 jobs** and **\$889 million** in total value add in 2018-19.

- The Qantas Group operations in Northern Australia directly contributes **\$527 million** in value added and indirectly contributes an additional **\$362 million** in value added.
- The Qantas Group directly provides **584 jobs** in Northern Australia and indirectly supports an additional **2,055 jobs** in upstream industries such as catering and airport support staff.

The total economic contribution of operations by the Qantas Group constituted 0.7% of Gross Regional Product in Northern Australia.

Table iii Economic contribution of the Qantas Group's operations in Northern Australia

| | Direct | Indirect | Total |
|--------------------------|--------|----------|-------|
| Value added (\$m) | 527 | 362 | 889 |
| Employment (FTE) | 584 | 2,055 | 2,639 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

The role of the Qantas Group in facilitating tourism activity in Northern Australia was estimated to contribute **14,026 jobs** and **\$1.7 billion** in value added to regional Australia in 2018-19. This represents around 13% of Qantas Group tourism employment and total value added.

- The tourism activity in regional Australia facilitated by the Qantas Group directly contributes **\$943 million** in value added and indirectly contributes an additional **\$771 million** in value added.
- This facilitated tourism activity directly provides **9,068 jobs** in regional Australia and indirectly supports an additional **4,958 jobs** in upstream industries such as agriculture.

The total economic contribution of tourism activity facilitated by the operations by the Qantas Group constituted 1.4% of Gross Regional Product in Northern Australia.

Table iv Facilitated tourism contribution of the Qantas Group in Northern Australia

| | Direct | Indirect | Total |
|--------------------------|---------------|-----------------|--------------|
| Value added (\$m) | 943 | 771 | 1,713 |
| Employment (FTE) | 9,068 | 4,958 | 14,026 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

Contribution to selected regional areas

Deloitte Access Economics was also asked by the Qantas Group to estimate its economic contribution to six regional areas, namely Gold Coast, Hobart, Alice Springs, Geelong, Central Queensland and New England.

Table v Economic contribution of the Qantas Group in selected regional areas

| | Direct | Indirect | Total |
|--------------------------|---------------|-----------------|--------------|
| Value added (\$m) | | | |
| Gold Coast | 113 | 144 | 257 |
| Hobart | 55 | 45 | 100 |
| Central Australia | 53 | 33 | 86 |
| Geelong | 17 | 31 | 48 |
| New England | 12 | 24 | 36 |
| Central Queensland | 29 | 50 | 78 |
| Employment (FTE) | | | |
| Gold Coast | 222 | 868 | 1,090 |
| Hobart | 133 | 305 | 437 |
| Central Australia | 33 | 193 | 226 |
| Geelong | 34 | 232 | 266 |
| New England | 72 | 172 | 245 |
| Central Queensland | - | 282 | 282 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

Deloitte Access Economics has also estimated the facilitated tourism contribution of the Qantas Group in these six regional areas.

Table vi Facilitated tourism contribution of the Qantas Group in selected regional areas

| | Direct | Indirect | Total |
|--------------------------|--------|----------|--------|
| Value added (\$m) | | | |
| Gold Coast | 429 | 431 | 860 |
| Hobart | 141 | 111 | 253 |
| Central Australia | 91 | 52 | 143 |
| Geelong | 21 | 64 | 85 |
| New England | 14 | 56 | 71 |
| Central Queensland | 38 | 75 | 113 |
| Employment (FTE) | | | |
| Gold Coast | 6,814 | 3,346 | 10,160 |
| Hobart | 3,071 | 800 | 3,871 |
| Central Australia | 1,200 | 821 | 2,021 |
| Geelong | 233 | 518 | 751 |
| New England | 137 | 493 | 630 |
| Central Queensland | 398 | 583 | 980 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

Jetstar contribution to Australia

Deloitte Access Economics estimated Jetstar's contribution to the Australian economy in the 2018-19 financial year. Combining the direct and indirect economic results, the total economic contribution of Jetstar to the Australian economy in 2018-19 was **9,607 FTE jobs** and **\$2.4 billion** in value added.

In addition to directly providing **4,097 FTE jobs**, Jetstar indirectly contributes to supporting employment of **5,510 FTE jobs** in the broader supply chain.

Table vii Economic contribution of Jetstar

| | Direct | Indirect | Total |
|--------------------------|--------|----------|-------|
| Value added (\$b) | 1.4 | 1.0 | 2.4 |
| Employment (FTE) | 4,097 | 5,510 | 9,607 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

In addition to the economic contribution, Jetstar plays a vital role in facilitating domestic and international tourism in Australia. The additional total value added to the Australian economy associated with the role of Jetstar in facilitating tourism in FY19 is estimated to be **\$4.6 billion** and **37,706 FTE jobs**.

Table viii Facilitated tourism contribution of Jetstar

| | Direct | Indirect | Total |
|--------------------------|--------|----------|--------|
| Value added (\$b) | 2.3 | 2.3 | 4.6 |
| Employment (FTE) | 23,674 | 14,032 | 37,706 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

Jetstar also makes a significant contribution to regional and Northern Australia. In FY19, Jetstar’s economic contribution to regional Australia was **\$599 million** in value added and **1,862 FTE jobs**, representing around 30% and 25% of the Qantas Group’s contribution, respectively. Jetstar also contributed **\$256 million** and **713 FTE jobs** in Northern Australia.

Of the six regional communities considered in this study, Jetstar has substantial operations in Hobart, Gold Coast and Geelong – which combined represent the majority of Qantas Group’s economic contribution in these regions.

The regional facilitated tourism contribution of Jetstar is larger than its economic contribution at **\$1.7 billion** in value added (\$823 million direct and \$873 million indirect) and **15,715 FTE jobs** (8,727 direct and 6,988 indirect). This is 39% of the total Qantas Group facilitated tourism contribution in terms of value added and around 43% of total FTE employment.

Jetstar’s facilitated tourism contribution to Northern Australia in terms of value added was estimated at **\$589 million** (\$314 million direct and \$275 million indirect) and **4,973 FTE jobs** (3,030 direct and 1,943 indirect).

In the selected regional areas, Jetstar made the largest tourism contribution in the Gold Coast (**\$505 million** in value added and **4,762 FTE jobs**) and Hobart (**\$154 million** and **1,725 FTE jobs**).

1 Economic contribution of the Qantas Group

Deloitte Access Economics has measured Qantas Group's contribution to the Australian economy in the 2018-19 financial year and has found the following:

- Combining the direct and indirect economic contribution results, the total economic contribution of Qantas Group to the Australian economy was **55,312** Full Time Equivalent (FTE) jobs and **\$12.8 billion** in value added for 2018-19.
- In addition to directly providing **25,394** FTE Australian jobs, Qantas Group indirectly contributes an estimated **29,918** FTE Australian jobs by procuring **\$10.7 billion** in goods and services in Australia and overseas required to meet its supply chain.
- The overall economic contribution has increased by **10.1%** since FY17 (or 4.9% p.a.) while total employment contribution has fallen by 2.0% (or 1.0% p.a.).
- The total economic contribution of the Qantas Group represents **0.7%** of Gross Domestic Product in Australia. Considering solely the direct contribution, the operations of the Qantas Group represented **0.4%** of Gross Domestic Product.

1.1 Economic contribution

1.1.1 Direct contribution

The direct economic contribution was estimated based on the returns to capital (i.e. gross operating surplus, or GOS) and labour income (i.e. employee wages) generated by the Qantas Group. Estimates of direct contribution were based on revenue, expenditure and employment data provided by the Qantas Group.

- The majority (around 58%) of the Qantas Group's direct value added flowed to employees, with the Group's labour income totalling \$4.2 billion and GOS \$3.1 billion. While the airline industry may appear capital intensive, this split of value added indicates a large share of the income contributed by the airline's activities flows to employees.
- Qantas Airlines makes the largest economic contribution with 77% of the Qantas Group's total value added, with Jetstar around 19% and Qantas Freight at 4%.
- New South Wales (NSW) receives the largest share of the Qantas Group's direct economic contribution, as Qantas headquarters and operations are based in Sydney and, thus, NSW attracts a large share of labour income and employment.

Table 1.1 Direct value added (\$m) and employment (FTE) by state/territory

| State | Qantas Airlines | | Jetstar | | Qantas Freight | | Qantas Group | |
|------------------|-----------------|---------------|--------------|--------------|----------------|--------------|--------------|---------------|
| | Value added | Employment | Value added | Employment | Value added | Employment | Value added | Employment |
| NSW/ACT | 2,588 | 11,101 | 364 | 951 | 108 | 540 | 3,060 | 12,593 |
| VIC | 1,037 | 3,371 | 570 | 2,083 | 60 | 264 | 1,668 | 5,718 |
| QLD | 1,073 | 3,198 | 340 | 821 | 48 | 161 | 1,461 | 4,180 |
| SA | 217 | 540 | 73 | 212 | 13 | 57 | 303 | 808 |
| WA | 572 | 1,711 | 22 | 23 | 23 | 100 | 617 | 1,834 |
| TAS | 53 | 115 | 41 | 7 | 5 | 11 | 98 | 134 |
| NT | 76 | 106 | 14 | 0 | 5 | 20 | 96 | 126 |
| Australia | 5,617 | 20,143 | 1,423 | 4,097 | 263 | 1,154 | 7,303 | 25,394 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

1.1.2 Indirect contribution

Indirect value added and employment captures the wages and GOS contributed by the Qantas Group to upstream sectors that produce inputs to the airline's operations, summarised in Table 1.2 below.

- Sydney attracts a high volume of tourists and transit flights, with NSW accounting for almost one-third of all Qantas' passengers nation-wide.
- Victoria and Queensland also receive a large share of the Qantas Group's economic contribution. Victoria attracts a large share of the company's intermediate expenditure, as the Group demands a range of goods and services from the state due to its sizeable transport services industry and Queensland attracts a large share of passenger departures for the Group.

Table 1.2 Indirect value added (\$m) and employment (FTE) by state/territory

| State | Qantas Airlines | | Jetstar | | Qantas Freight | | Qantas Group | |
|------------------|-----------------|---------------|--------------|--------------|----------------|--------------|--------------|---------------|
| | Value added | Employment | Value added | Employment | Value added | Employment | Value added | Employment |
| NSW/ACT | 1,441 | 7,721 | 315 | 1,678 | 195 | 1,068 | 1,951 | 10,467 |
| VIC | 1,142 | 6,105 | 318 | 1,699 | 107 | 588 | 1,567 | 8,393 |
| QLD | 786 | 4,441 | 215 | 1,285 | 91 | 525 | 1,091 | 6,251 |
| SA | 190 | 1,240 | 37 | 246 | 21 | 132 | 247 | 1,618 |
| WA | 382 | 1,794 | 96 | 420 | 43 | 216 | 521 | 2,429 |
| TAS | 28 | 197 | 3 | 19 | 2 | 16 | 34 | 232 |
| NT | 54 | 322 | 24 | 162 | 8 | 43 | 85 | 527 |
| Australia | 4,022 | 21,820 | 1,006 | 5,510 | 468 | 2,587 | 5,496 | 29,918 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

1.1.3 Total contribution

Total economic contribution is the sum of direct and indirect contribution and is shown in Table 1.3.

- NSW represents around 40% of the total economic contribution reflecting both the large Qantas Group workforce and Sydney's status as a key gateway and destination.
- Overall, Qantas Airlines comprises around 75% of total value added and 76% of total employment, while Jetstar makes up 19% and 17% respectively and Freight 6% and 7% respectively. The total value added and employment depends on the size of the operations of each business area and the flow on effects to the broader state and territory economies.

Table 1.3 Total value added (\$m) and employment (FTE) by state/territory

| State | Qantas Airlines | | Jetstar | | Qantas Freight | | Qantas Group | |
|------------------|-----------------|---------------|--------------|--------------|----------------|--------------|---------------|---------------|
| | Value added | Employment | Value added | Employment | Value added | Employment | Value added | Employment |
| NSW/ACT | 4,029 | 18,822 | 679 | 2,629 | 304 | 1,609 | 5,011 | 23,060 |
| VIC | 2,179 | 9,477 | 888 | 3,782 | 167 | 852 | 3,234 | 14,111 |
| QLD | 1,859 | 7,639 | 555 | 2,107 | 139 | 685 | 2,553 | 10,431 |
| SA | 407 | 1,780 | 109 | 458 | 34 | 188 | 550 | 2,426 |
| WA | 954 | 3,504 | 118 | 443 | 66 | 316 | 1,138 | 4,264 |
| TAS | 81 | 312 | 44 | 26 | 7 | 27 | 132 | 366 |
| NT | 130 | 428 | 38 | 162 | 13 | 63 | 181 | 654 |
| Australia | 9,639 | 41,963 | 2,430 | 9,607 | 731 | 3,741 | 12,799 | 55,312 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

1.2 Facilitated tourism contribution of the Qantas Group

The Qantas Group also plays an important role in supporting tourism across Australia. Given Australia's size and the geographical dispersion of key tourist locations, Qantas plays an important role in facilitating both domestic and international tourism.

The approach to estimating the facilitated tourism contribution of the Qantas Group to Australia is based on passenger data from Qantas Group and the Bureau of Infrastructure, Transport and Regional Economics (BITRE). This is also supported by visitor expenditure data from Tourism Research Australia.

1.2.1 Direct tourism contribution

Facilitated tourism activity by the Qantas Group is estimated to directly contribute \$4.1 billion through domestic tourists, and \$2.5 billion through international tourists in 2018-19. Queensland supports the most direct facilitated domestic tourism activity by Qantas at \$1.2 billion, with New South Wales supporting the most direct international facilitated tourist activity, at \$921 million.

Table 1.4 Direct value added of facilitated tourism by state/territory (\$m)

| State | Domestic | | | International | | |
|------------------|--------------|--------------|--------------|---------------|------------|--------------|
| | Qantas | Jetstar | Total | Qantas | Jetstar | Total |
| NSW | 492 | 365 | 857 | 651 | 270 | 921 |
| VIC | 354 | 289 | 643 | 452 | 179 | 630 |
| QLD | 632 | 576 | 1,207 | 372 | 169 | 541 |
| SA | 159 | 58 | 218 | 65 | 25 | 90 |
| WA | 610 | 39 | 649 | 143 | 49 | 192 |
| TAS | 49 | 148 | 197 | 30 | 11 | 41 |
| NT | 132 | 71 | 203 | 17 | 7 | 25 |
| ACT | 102 | - | 102 | 40 | 16 | 57 |
| Australia | 2,530 | 1,545 | 4,075 | 1,771 | 726 | 2,497 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

Facilitated tourism activity by the Qantas Group is estimated to directly contribute 45,243 FTE jobs through domestic tourists, and a further 22,771 through international tourists.

Table 1.5 Direct employment contribution of facilitated tourism by state/territory (FTE)

| State | Domestic | | | International | | |
|------------------|---------------|---------------|---------------|---------------|--------------|---------------|
| | Qantas | Jetstar | Total | Qantas | Jetstar | Total |
| NSW | 4,887 | 3,616 | 8,502 | 5,516 | 2,289 | 7,805 |
| VIC | 4,339 | 3,541 | 7,880 | 4,232 | 1,671 | 5,902 |
| QLD | 6,759 | 6,156 | 12,915 | 3,504 | 1,584 | 5,087 |
| SA | 1,794 | 658 | 2,452 | 614 | 235 | 849 |
| WA | 7,513 | 477 | 7,990 | 1,493 | 515 | 2,008 |
| TAS | 668 | 1,999 | 2,667 | 334 | 119 | 452 |
| NT | 1,151 | 623 | 1,774 | 140 | 58 | 198 |
| ACT | 1,064 | - | 1,064 | 335 | 134 | 469 |
| Australia | 28,175 | 17,069 | 45,243 | 16,166 | 6,605 | 22,771 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

1.2.2 Indirect tourism contribution

Facilitated tourism activity by the Qantas Group is estimated to indirectly contribute a further \$4.4 billion through domestic tourists, and \$2.2 billion through international tourists in 2018-19. The facilitated domestic and international tourism activity also supports a further 37,991 FTE jobs across Australia.

Consistent with the direct contribution results, Queensland supports the most indirect facilitated domestic tourism activity by Qantas at \$1.3 billion, with New South Wales supporting the most indirect international facilitated tourist activity, at \$776 million.

Table 1.6 Indirect value added of facilitated tourism by state/territory (\$m)

| State | Domestic | | | International | | |
|------------------|--------------|--------------|--------------|---------------|------------|--------------|
| | Qantas | Jetstar | Total | Qantas | Jetstar | Total |
| NSW | 520 | 385 | 905 | 549 | 226 | 776 |
| VIC | 392 | 320 | 712 | 399 | 157 | 556 |
| QLD | 680 | 620 | 1,300 | 326 | 147 | 473 |
| SA | 183 | 67 | 251 | 60 | 23 | 83 |
| WA | 622 | 40 | 662 | 120 | 42 | 162 |
| TAS | 62 | 186 | 248 | 30 | 11 | 40 |
| NT | 137 | 74 | 212 | 15 | 6 | 21 |
| ACT | 103 | - | 103 | 34 | 13 | 47 |
| Australia | 2,700 | 1,691 | 4,391 | 1,534 | 625 | 2,159 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

Table 1.7 Indirect employment contribution of facilitated tourism by state/territory (FTE)

| State | Domestic | | | International | | |
|------------------|---------------|---------------|---------------|---------------|--------------|---------------|
| | Qantas | Jetstar | Total | Qantas | Jetstar | Total |
| NSW | 2,695 | 1,996 | 4,691 | 2,845 | 1,172 | 4,016 |
| VIC | 2,080 | 1,698 | 3,779 | 2,119 | 835 | 2,954 |
| QLD | 4,045 | 3,685 | 7,730 | 1,944 | 877 | 2,821 |
| SA | 1,102 | 404 | 1,506 | 363 | 139 | 502 |
| WA | 3,332 | 212 | 3,544 | 645 | 223 | 868 |
| TAS | 703 | 2,103 | 2,806 | 338 | 119 | 457 |
| NT | 834 | 452 | 1,285 | 90 | 37 | 127 |
| ACT | 623 | - | 623 | 202 | 81 | 283 |
| Australia | 15,414 | 10,549 | 25,963 | 8,544 | 3,483 | 12,028 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

1.2.3 Total tourism contribution

Overall, the facilitated tourism activity by the Qantas Group is estimated at \$13.1 billion in 2018-19. Of this total, \$8.5 billion is attributable to domestic tourists, and \$4.7 billion is attributable to international tourists.

The facilitated tourism activity attributable to domestic tourists is greatest in Queensland for both Qantas and Jetstar, at \$1.3 billion and \$1.2 billion, respectively. This result reflects the popularity of the Queensland coast as a holiday destination for local travellers. This is noticeably the case for Jetstar, with Queensland accounting for approximately 37 percent of the total value added associated with tourism expenditure facilitated by Jetstar. This compares to 25 percent for Qantas, reflecting a more widespread facilitated tourism contribution across Australian states and territories.

In terms of international tourists, New South Wales presents the greatest levels of facilitated tourism activity attributable to both Qantas and Jetstar, at \$1.2 billion and \$496 million, respectively. This represents the key role of the state as a tourism destination and gateway for international travellers.

Table 1.8 Total value added of facilitated tourism to tourism by state/territory (\$m)

| State | Domestic | | | International | | |
|------------------|--------------|--------------|--------------|---------------|--------------|--------------|
| | Qantas | Jetstar | Total | Qantas | Jetstar | Total |
| NSW | 1,012 | 749 | 1,762 | 1,200 | 496 | 1,697 |
| VIC | 746 | 609 | 1,354 | 851 | 336 | 1,187 |
| QLD | 1,312 | 1,195 | 2,507 | 699 | 316 | 1,015 |
| SA | 343 | 126 | 468 | 126 | 48 | 174 |
| WA | 1,232 | 78 | 1,310 | 263 | 91 | 354 |
| TAS | 112 | 334 | 446 | 60 | 21 | 81 |
| NT | 269 | 146 | 415 | 32 | 13 | 46 |
| ACT | 205 | - | 205 | 74 | 30 | 104 |
| Australia | 5,230 | 3,237 | 8,467 | 3,304 | 1,352 | 4,656 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

The expenditure of domestic and international tourists attributable to the Qantas Group also contributes to the employment of approximately 106,000 employees across Australia in 2018-19.

Consistent with the value added results, the majority of these employees are a result of passengers carried by Qantas (64 percent). Similarly, Jetstar's facilitated tourism activity is noticeably stronger for domestic compared to international tourists, contributing 39 percent of the total employment, compared to 29 percent for international passengers.

Table 1.9 Total employment contribution of facilitated tourism by state/territory (FTE)

| State | Domestic | | | International | | |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | Qantas | Jetstar | Total | Qantas | Jetstar | Total |
| NSW | 7,582 | 5,612 | 13,194 | 8,361 | 3,461 | 11,822 |
| VIC | 6,419 | 5,239 | 11,658 | 6,350 | 2,506 | 8,856 |
| QLD | 10,804 | 9,841 | 20,645 | 5,447 | 2,461 | 7,909 |
| SA | 2,895 | 1,062 | 3,958 | 977 | 374 | 1,351 |
| WA | 10,845 | 689 | 11,534 | 2,138 | 738 | 2,876 |
| TAS | 1,372 | 4,101 | 5,473 | 671 | 238 | 909 |
| NT | 1,985 | 1,074 | 3,059 | 230 | 95 | 324 |
| ACT | 1,686 | - | 1,686 | 536 | 215 | 751 |
| Australia | 43,589 | 27,618 | 71,206 | 24,711 | 10,088 | 34,799 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

2 Economic contribution of the Qantas Group in Regional Australia

This chapter examines the economic contribution of the Qantas Group's operations in regional Australia. Based on discussions with Qantas, for the purposes of this study, regional Australia has been defined as encompassing all regions outside of the capital cities, e.g. Sydney, Melbourne, Brisbane, Canberra, Hobart, Adelaide, Darwin and Perth.

The scope of the analysis in this chapter is limited to estimating the contribution of the operations by the Qantas Group in regional Australia and its role in facilitating tourism expenditure. It does not consider the broader role of the Qantas Group in improving the connectedness of regional communities. Access to air services provides important links for regional communities to family and friends throughout Australia and more broadly, as well as access to essential medical services and supplies. The analysis also does not capture the value of air services in improving access to markets (although freight revenue is included) and the impact of air services on productivity (the latter is often referred to as the 'catalytic impacts' of air travel). These are all important dimensions of the role played by aviation in connecting regional communities.

The analysis has been undertaken by drawing on both publicly available data as well as data from the Qantas Group. In terms of operational data, the Qantas Group provided detailed revenue and expenditure figures for each airport it operates from in regional Australia, as well as employment numbers and passengers carried. The facilitated tourism analysis has been undertaken using route level data from Qantas and Jetstar in regional Australia, which can be used to estimate market shares for each airport, and tourism data on nights and expenditure by region from Tourism Research Australia.

The economic contribution of the Qantas Group's operations in regional Australia has been estimated based on an assessment of the level of output that occurs in regional Australia, rather than where the income from the supply of goods and services ultimately accrues.¹ In other words, the analysis focuses on where the production occurs. In the case of suppliers of intermediate inputs, the value added is attributed to the regional destination where the output occurs, even if the business is headquartered elsewhere.

The direct economic contribution accruing to each region was estimated based on the gross operating surplus and labour income attributable to all regional airports that Qantas provides services to in regional Australia. In this respect, estimates of direct contribution were based on information from Qantas on wages paid, the number of passengers carried and the average fare they pay as well as the level of expenditure on intermediate inputs from other suppliers.

The indirect contribution to regional areas in each state and territory was calculated using a two-stage process. The first stage involved estimating the flow-on activity associated with expenditure by the Qantas Group on intermediate inputs within each region. This involved applying a region-specific input-output table developed from the Deloitte Access Economics Regional Input-Output Model (DAE-RIOM) to estimate the *contribution of intermediate inputs that the Qantas Group purchased in each specific region*. The second stage involved estimating the contribution associated with the *supply of intermediate inputs to support activity by the Qantas Group in the rest of Australia*. The second stage was estimated based on the direction of inter-regional trade flows in the DAE-RIOM.

¹ In national accounting terms the approach is consistent with measuring Gross Domestic Product (or in this case Gross Regional Product) rather than Gross National Income (or equivalently Gross Regional Income).

Qantas Group’s largest regional procurement is largely spent on transport support services and storage activities, such as route navigation, landing fees, and security charges; and air and space transport activities. Spending in these areas has flow on benefits in upstream industries such as professional, scientific and technical services, which supply security or navigation services or travel agency, employment and other administrative services, which supply other travel services.

For an organisation as diverse as the Qantas Group there is no perfect way of determining the proportion of activity attributable to the operations of the Qantas Group in regional Australia. However, given the data available, the approach taken in this study provides the most appropriate basis for estimating the contribution of the Qantas Group and its operations to regional Australia.

2.1 Economic contribution to regional Australia

The economic contribution of the Qantas Group to regional Australia is shown in Table 2.1 below. The value added figures highlight the importance of regional activities to the Qantas Group's broader operations. The \$789 million in direct value added contributed by the Qantas Group’s regional operations constitutes 11% of its national direct contribution. Similarly, the \$845 million in indirect value added contributed by the Qantas Group’s regional operations constitutes 15% of the indirect contribution made by its national operations.

The direct employment figures refer to the number of people directly employed by Qantas and Jetstar in regional Australia. It should be noted that the indirect employment contribution was larger than the direct employment contribution as many positions in regional airports were outsourced to external contractors. By comparison, a greater proportion of the ground handling and catering staff in capital cities are employed directly. Indeed, while indirect employment associated with Qantas Group’s regional operations constituted 16% of the national total, direct employment in regional Australia only constituted 4% of the national total.

In this respect, **1,320 employees** were employed by external organisations to support their operations in airports in regional Australia including baggage handling and ground support who are not included in the estimates of direct employment provided below as they are employed by separate organisations and are thus considered indirect employment. Some flight crew servicing regional Australia may also be based in capital cities, although much of their work may be done in regional Australia.

Of the indirect value added, **\$384 million** was estimated to be attributable to the demand for intermediate inputs by the Qantas Group as a result of its operations in the region in which those operations occur, while **\$461 million** was attributable to demand for intermediate inputs from regional suppliers by the Qantas Group to operations in other regions both metropolitan regions and other regional areas (e.g. intermediate inputs supply from Regional Victoria to Regional NSW).

Table 2.1 Economic contribution of the Qantas Group’s operations in regional Australia

| | Direct | Indirect | Total |
|--------------------------|--------|----------|-------|
| Value added (\$m) | 789 | 845 | 1,635 |
| Employment (FTE) | 1,083 | 4,797 | 5,879 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

2.1.1 Economic contribution in regional areas

Using the DAE-RIOM, Deloitte Access Economics estimated the contribution associated with Qantas Group operations in regional areas of each State (and the Northern Territory). The indirect value added and employment component is then adjusted upwards to account for intermediate inputs supplied to the rest of Australia by each region in the second stage of the analysis. The results are summarised in 0 below.

Regional Queensland captured the largest share of the Qantas Group’s regional operations, as the Qantas Group is estimated to contribute **2,830 jobs** and **\$848 million** in value added to regional Queensland. In fact, the state accounts for more than half of the Qantas Group’s contribution to value added and employment in regional Australia.

Regional Western Australia also accounts for a relatively large share of regional activity. The Qantas Group is estimated to contribute **525 jobs** and **\$216 million** in value add to regional Western Australia. Major regional airports in regional Western Australia include Karratha, Broome, Port Headland and Newman, which each attract a high volume of passenger traffic due to their proximity to mining activity.

Regional New South Wales also receives a large share of Qantas Group's regional economic contribution, where total activity contributes **1,485 jobs** and **\$293 million** in value added.

In the case of regional Victoria (and regional New South Wales) indirect value added and employment were substantially larger than direct value added and employment. This reflects the two-step process involved in estimating the indirect contribution from regional areas to the rest of Australia. Regional New South Wales accounts for a moderate share of passenger activity in regional Australia but a large share of economic activity including the procurement of goods and services. As a result, the direct contribution to regional NSW (which depends on passenger share) is smaller than the indirect contribution (which depends more on economic size).

In the case of Victoria, \$70 million of indirect value added is attributable to expenditure in areas outside regional Victoria creating demand for the region where only \$12 million in indirect value added is due to intermediate inputs purchased as a result of operations by the Qantas Group in regional Victoria. By comparison, in Queensland, the majority of indirect value added (\$236 million) is attributable to demand for intermediate inputs from operations in regional Queensland given the significant size of Qantas Group's operations in regional Queensland.

Table 2.2 Economic contribution of the Qantas Group's operations in regional areas in each state/territory

| | Direct | Indirect | Total |
|-----------------------------|---------------|-----------------|--------------|
| Value added (\$m) | | | |
| Regional Queensland | 453 | 395 | 848 |
| Regional Western Australia | 123 | 94 | 216 |
| Regional NSW | 97 | 195 | 293 |
| Regional Northern Territory | 53 | 32 | 85 |
| Regional Tasmania | 32 | 28 | 60 |
| Regional Victoria | 26 | 82 | 108 |
| Regional South Australia | 6 | 20 | 26 |
| Regional Australia | 789 | 845 | 1,635 |
| Employment (FTE) | | | |
| Regional Queensland | 772 | 2,058 | 2,830 |
| Regional Western Australia | 1 | 524 | 525 |
| Regional NSW | 230 | 1,255 | 1,485 |
| Regional Northern Territory | 33 | 177 | 210 |
| Regional Tasmania | 1 | 133 | 134 |
| Regional Victoria | 46 | 512 | 559 |
| Regional South Australia | - | 137 | 137 |
| Regional Australia | 1,083 | 4,797 | 5,879 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

2.2 Facilitated tourism contribution to regional Australia

In addition to supporting jobs and economic activity in regional areas through its operations, the Qantas Group also plays an instrumental role in supporting tourism in regional Australia. The approach to estimating the facilitated tourism contribution of the Qantas Group to regional Australia was based on data on passengers carried from the Qantas Group and visitor expenditure data from Tourism Research Australia.

Estimates of the share of domestic air travellers using Qantas Group aircraft were derived for each region based on data from Qantas on route level passenger flows and market shares. For international travellers, estimates of market share by source country were mapped to the distribution of visitor nights by region and source country to estimate international visitor nights by region. Tourism expenditure was estimated by multiplying the average length of stay in each region by the average amount spent per night by each visitor, based on data from the National and International Visitor Surveys published by Tourism Research Australia.

In line with the approach used to estimate the economic contribution associated with Qantas Group's operations in regional Australia, a two-stage process was undertaken to estimate the indirect contribution of facilitated tourism in regional Australia. The estimates of indirect contribution provided include both: the contribution of expenditure by tourists in specific region on value added and employment in that region; and the contribution of expenditure by tourists in the rest of Australia on the demand for inputs from a specific region in regional Australia – for example when a tourist purchases a coffee in Melbourne, some of the milk used to produce that coffee is likely to come from regional Victoria.

Table 2.3 Facilitated tourism contribution of the Qantas Group in regional Australia

| | Direct | Indirect | Total |
|--------------------------|--------|----------|--------|
| Value added (\$m) | 2,005 | 2,355 | 4,361 |
| Employment (FTE) | 21,213 | 15,605 | 36,818 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

2.2.1 Facilitated tourism in regional areas

The expenditure of tourists carried by Qantas Group was estimated to contribute **17,250 jobs** and **\$2.0 billion** in value added to regional Queensland (see Table 2.4 below). Indeed, regional Queensland accounts for almost half of the total facilitated tourism value added in regional Australia by the Qantas Group.

The expenditure of tourists carried by Qantas Group was also estimated to make a relatively large contribution to regional **Western Australia**, contributing **5,145 jobs** and **\$534 million** in value added.

Tourism expenditure facilitated by the Qantas Group was estimated to contribute **6,571 jobs** and **\$918 million** in value added to regional **New South Wales**.

Table 2.4 Facilitated tourism contribution for regional areas in each state/territory

| | Direct | Indirect | Total |
|-----------------------------|---------------|---------------|---------------|
| Value added (\$m) | | | |
| Regional Queensland | 1,051 | 966 | 2,017 |
| Regional Western Australia | 317 | 217 | 534 |
| Regional NSW | 288 | 630 | 918 |
| Regional Northern Territory | 104 | 55 | 159 |
| Regional Tasmania | 73 | 80 | 154 |
| Regional Victoria | 142 | 310 | 452 |
| Regional South Australia | 30 | 96 | 126 |
| Regional Australia | 2,005 | 2,355 | 4,361 |
| Employment (FTE) | | | |
| Regional Queensland | 10,845 | 6,406 | 17,250 |
| Regional Western Australia | 3,860 | 1,284 | 5,145 |
| Regional NSW | 2,721 | 3,851 | 6,571 |
| Regional Northern Territory | 891 | 366 | 1,257 |
| Regional Tasmania | 965 | 1,045 | 2,010 |
| Regional Victoria | 1,619 | 1,953 | 3,572 |
| Regional South Australia | 312 | 701 | 1,013 |
| Regional Australia | 21,213 | 15,605 | 36,818 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

3 Economic contribution of the Qantas Group in Northern Australia

This chapter examines the economic contribution of the Qantas Group's operations in Northern Australia. Based on discussions with Qantas for the purposes of this study Northern Australia has been defined as all of Northern Territory, and those Local Government Areas (LGAs) in Queensland and Western Australia above and intersecting the Tropic of Capricorn. As with regional Australia, there is no consistently applied definition of what encompasses Northern Australia. This is the definition that is applied by Northern Australia Infrastructure Facility (NAIF)² and the Regional Institute of Australia (RIA)³.

It is worth noting that there may be minor differences in the regions included given a conversion from LGAs to Statistical Area Level 2 (SA2) regions is necessary. However, this is unlikely to significantly vary the results.

The analysis has been undertaken by drawing on both publicly available data as well as data from the Qantas Group. In terms of operational data, the Qantas Group provided detailed revenue and expenditure figures for each airport it operates from in Northern Australia, as well as employment numbers. The facilitated tourism analysis has been undertaken using route level data from Qantas and Jetstar in Northern Australia, which can be used to estimate market shares for each airport, and tourism data on nights and expenditure by SA2 from Tourism Research Australia.

The economic contribution of the Qantas Group's operations in Northern Australia has been estimated based on an assessment of the level of output that occurs in Northern Australia, rather than where the income from the supply of goods and services ultimately accrues.⁴ In other words, the analysis focuses on where the production occurs. In the case of suppliers of intermediate inputs, the value added is attributed to the regional destination where the output occurs, even if the business is headquartered elsewhere.

The direct economic contribution was estimated based on the gross operating surplus and labour income attributable to all airports in Northern Australia that Qantas Group provides services. In this respect, estimates of direct contribution were based on information from Qantas on wages and salaries as well as the level of expenditure on intermediate inputs.

The indirect contribution to Northern Australia was calculated using a two-stage process. The first stage involved estimating the flow-on activity associated with expenditure by the Qantas Group on intermediate inputs within Northern Australia. This involved applying a region-specific input-output table developed from the Deloitte Access Economics Regional Input Output Model (DAE-RIOM) to estimate the *contribution of intermediate inputs that the Qantas Group purchased in Northern Australia*. The second stage involved estimating the contribution associated with the regional *supply of intermediate inputs to support activity by the Qantas Group outside of Northern Australia*. The second stage was estimated based on the direction of inter-regional trade flows in the DAE-RIOM.

For an organisation as diverse as the Qantas Group there is no perfect way of determining the proportion of activity attributable to the operations of the Qantas Group in Northern Australia.

² <https://www.treasury.qld.gov.au/programs-and-policies/northern-australia-infrastructure-facility/>

³ <http://www.regionalaustralia.org.au/wp-content/uploads/2013/11/Rethinking-the-future-of-northern-Australias-regions1.pdf>

⁴ In national accounting terms the approach is consistent with measuring Gross Domestic Product (or in this case Gross Regional Product) rather than Gross National Income (or equivalently Gross Regional Income).

However, given the data available, the approach taken in this study provides the most appropriate basis for estimating the contribution of the Qantas Group and its operations to Northern Australia.

3.1 Economic contribution to Northern Australia

The economic contribution of the Qantas Group to Northern Australia is shown in Table 3.1 below. The value added figures highlight the importance of Qantas Group activity in Northern Australia to its overall operations. The **\$527 million** in direct value added contributed by the Qantas Group's Northern Australia operations constitutes 7% of its national direct contribution. Similarly, the **\$362 million** in indirect value added contributed by the Qantas Group's regional operations constitutes 3% of the indirect contribution made by its national operations.

The total economic contribution of operations by the Qantas Group constituted 0.7% of Gross Regional Product in Northern Australia.

Table 3.1 Economic contribution of the Qantas Group's operations in Northern Australia

| | Direct | Indirect | Total |
|--------------------------|--------|----------|-------|
| Value added (\$m) | 527 | 362 | 889 |
| Employment (FTE) | 584 | 2,055 | 2,639 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

3.2 Facilitated tourism contribution to Northern Australia

In addition to supporting jobs and economic activity through its operations, the Qantas Group also plays an instrumental role in supporting tourism in Northern Australia. The approach to estimating the facilitated tourism contribution of the Qantas Group to Northern Australia was based on data on passengers carried by Qantas and Jetstar and on visitor expenditure from Tourism Research Australia.

Estimates of the share of domestic air travellers using Qantas and Jetstar aircraft were derived for each region based on data from Qantas on route level passenger flows. For international travellers, estimates of market share by source country were mapped to the distribution of visitor nights in Northern Australia and source country to estimate international visitor nights by region. Tourism expenditure was estimated by multiplying the average length of stay in each region in Northern Australia by the average amount spent per night by each visitor, based on data from the National and International Visitor Surveys published by Tourism Research Australia.

In line with the approach used to estimate the economic contribution associated with Qantas Group's operations in Regional Australia, a two-stage process was undertaken to estimate the indirect contribution of facilitated tourism in regional Australia. The estimates of indirect contribution provided include both: the contribution of expenditure by tourists in Northern Australia on value added and employment in Northern Australia; and the contribution of expenditure by tourists outside Northern Australia on the demand for inputs from Northern Australia.

The expenditure of tourists carried by Qantas Group was estimated to contribute **14,026 jobs** and **\$1,713 million** in value added to Northern Australia (see Table 3.2 below). Northern Australia accounts for around 13% of Qantas Group's facilitated tourism value added contribution and 13% of tourism employment contribution.

Table 3.2 Facilitated tourism contribution of the Qantas Group in Northern Australia

| | Direct | Indirect | Total |
|--------------------------|--------|----------|--------|
| Value added (\$m) | 943 | 771 | 1,713 |
| Employment (FTE) | 9,068 | 4,958 | 14,026 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

4 Economic contribution of the Qantas Group in selected regional areas

Deloitte Access Economics was also asked by the Qantas Group to estimate the economic contribution accruing to six regional areas selected by Qantas Group, namely Gold Coast, Hobart, Alice Springs, Geelong, Central Queensland and New England.⁵

Of the regional areas examined, the Gold Coast and Hobart airports make up the largest share of the regional contribution, with the Qantas Group contributing **1,090 jobs** and **\$257 million** in value added to the Gold Coast and **437 jobs** and **\$100 million** in value added to Hobart. The Qantas Group contributes **226 jobs** and **\$86 million** in value added in Central Australia.

4.1 Economic contribution in selected regional areas

Table 4.1 Economic contribution of the Qantas Group's operations in selected regional areas

| | Direct | Indirect | Total |
|--------------------------|--------|----------|-------|
| Value added (\$m) | | | |
| Gold Coast | 113 | 144 | 257 |
| Hobart | 55 | 45 | 100 |
| Central Australia | 53 | 33 | 86 |
| Geelong | 17 | 31 | 48 |
| New England | 12 | 24 | 36 |
| Central Queensland | 29 | 50 | 78 |
| Employment (FTE) | | | |
| Gold Coast | 222 | 868 | 1,090 |
| Hobart | 133 | 305 | 437 |
| Central Australia | 33 | 193 | 226 |
| Geelong | 34 | 232 | 266 |
| New England | 72 | 172 | 245 |
| Central Queensland | - | 282 | 282 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

⁵ For the purpose of creating economic contribution regions, SA4s by the same namesake were used for the Gold Coast, New England, Geelong and Hobart. The SA3 by the same namesake were used for Alice Springs as they best represented the regions in question. Central Queensland was represented by five SA3s: Outback – South, Central Highlands (Qld), Rockhampton, Gladstone and Biloela.

4.2 Facilitated tourism contribution in selected regional areas

Deloitte Access Economics has also estimated the facilitated tourism contribution of the Qantas Group to the six regional areas, namely Gold Coast, Hobart, Alice Springs, Geelong, Central Queensland and New England.

Of the regional areas examined, the expenditure of tourists carried by Qantas Group to Gold Coast and Hobart made the largest contribution. The expenditure of visitors traveling on Qantas Group contributes **10,160 jobs** and **\$860 million** in value added to the Gold Coast and **3,871 jobs** and **\$253 million** in value added to Hobart.

Table 4.2 Facilitated tourism contribution of the Qantas Group in selected regional areas

| | Direct | Indirect | Total |
|--------------------------|--------|----------|--------|
| Value added (\$m) | | | |
| Gold Coast | 429 | 431 | 860 |
| Hobart | 141 | 111 | 253 |
| Central Australia | 91 | 52 | 143 |
| Geelong | 21 | 64 | 85 |
| New England | 14 | 56 | 71 |
| Central Queensland | 38 | 75 | 113 |
| Employment (FTE) | | | |
| Gold Coast | 6,814 | 3,346 | 10,160 |
| Hobart | 3,071 | 800 | 3,871 |
| Central Australia | 1,200 | 821 | 2,021 |
| Geelong | 233 | 518 | 751 |
| New England | 137 | 493 | 630 |
| Central Queensland | 398 | 583 | 980 |

Source: Deloitte Access Economics. Note: All figures have been rounded to the nearest unit so totals may be subject to rounding errors.

5 Selected case studies

This chapter contains a selection of five case studies which document the contribution of the Qantas Group to selected regions and its role in supporting the growth of the aviation and tourism sectors in Australia over time. The five case studies explore:

- The role of the Qantas Group in supporting growth in the Tasmanian tourism sector
- The economic contribution of the Qantas Group since privatisation
- The relationship between air fares, travel volumes and consumer welfare
- The role of the Qantas Group in facilitating air freight
- The contribution of the Boeing 747 in facilitating Australia’s international tourism sector.

These case studies are set out below.

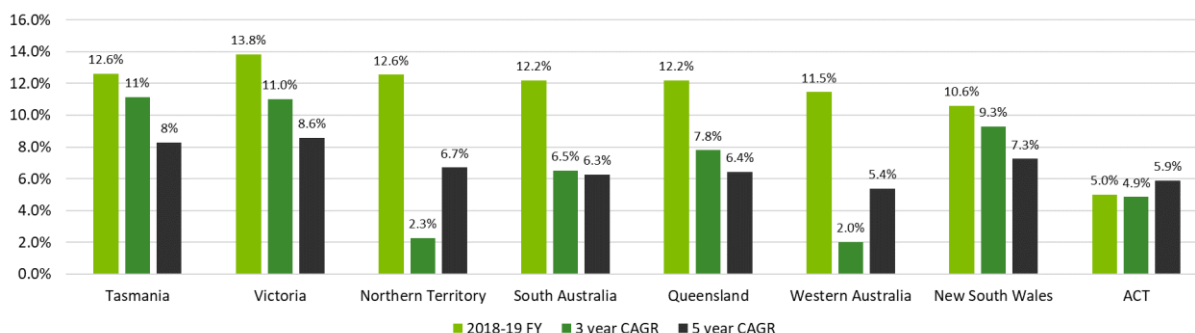
5.1 The role of aviation in supporting the growth of the Tasmanian tourism sector

The Tasmanian tourism sector has boomed in recent years with the emergence of a vibrant food, wine and arts scene. Tourists have flocked to iconic tourist attractions including the Museum of Old and New Art (MONA), Salamanca markets, excellent seafood restaurants, as well as festivals and events throughout the year, such as the Taste of Tasmania, Falls Festival and Dark Mofo.

Tasmania has always had breathtaking natural attractions, such as Wine Glass Bay and the Cradle Mountain wilderness region, but the unique combination of natural and cultural attractions has supported strong growth in the Tasmanian tourism sector in recent years.

Over the 2018-19 financial year, Tasmania experienced the second highest growth in domestic overnight visitors, with visitor numbers growing by 12.6 per cent. As shown in Chart 5.1, over the last three and five years, growth in domestic overnight visitors to Tasmania has outstripped all other states and territories except Victoria.

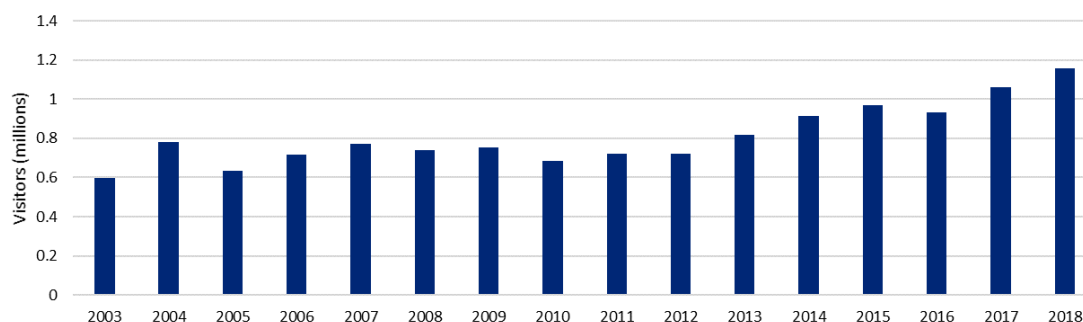
Chart 5.1 Growth of domestic overnight visitors



Source: Tourism Research Australia (2019) National Visitor Survey.

Recent growth in the tourism sector has been facilitated by growth in aviation capacity to Tasmania. The volume of domestic overnight visitors that arrived in Tasmania by air has doubled over the past 16 years, from 0.6 million in 2003 to 1.3 million in 2018-19 (as illustrated in Chart 5.2 below).

Chart 5.2 Interstate overnight visitors to Tasmania arriving by plane, calendar year



Source: Tourism Research Australia (2019) National Visitor Survey.

The tourism sector has in turn played an important role in supporting the Tasmanian economy. In total, domestic interstate tourism expenditure in Tasmania by those arriving by air was worth \$1.076 billion in 2018-19. Expenditure by international visitors in Tasmania was worth a further \$528 million in 2018-19.⁶

The Qantas Group has played an important role in supporting the tourism sector in Tasmania. Qantas provides services out of Hobart, Launceston and Devonport to help connect Tasmania to the mainland. In 2003 Jetstar entered the Tasmanian market and has since played a major role in boosting aviation capacity by providing a low-cost carrier option for tourists seeking to visit Tasmania.

The expenditure of visitors whose travel to Tasmania is enabled by the Qantas Group (including both international visitors who fly to Australia on Qantas Group airlines and domestic interstate visitors who fly to Tasmania on Qantas Group airlines) is estimated to facilitate \$527 million in total value added and 6,383 full time equivalent jobs in Tasmania.

Domestic visitors that arrive on Jetstar flights are estimated to contribute \$334 million in value added and support 4,101 full time equivalent jobs, while domestic visitors that arrive on Qantas are estimated to facilitate an additional \$112 million in value added and support 1,372 full time equivalent jobs in Tasmania through their expenditure. These figures exclude expenditure by those arriving on other domestic carriers, airfares (to avoid overlap with the Qantas Group's economic contribution) and also direct and indirect expenditure on imports and some expenditure on items less likely to be required by those travelling by air (see Appendix C for a discussion of methodology).

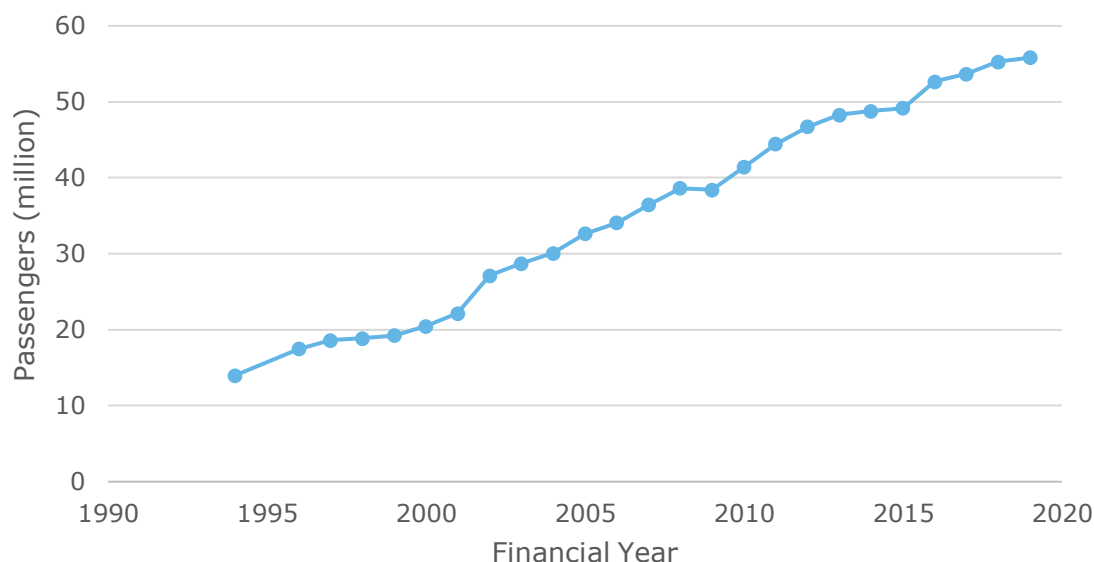
The Qantas Group's role in facilitating international tourism supports \$81 million in value added and 909 full time equivalent jobs in Tasmania. These figures are derived from the Group's estimated market share of international visitor arrivals by source country and the average visitor nights they spend in Tasmania.

⁶ Tourism Research Australia (2019) International Visitor Survey Results <https://www.tra.gov.au/international/international-tourism-results/overview>. This is a total expenditure figure for international visitors in Tasmania. Some of these may have arrived on the Spirit of Tasmania.

5.2 The contribution of the Qantas Group since privatisation

Since privatisation in 1994, the contribution of the Qantas Group to the Australian economy has grown significantly. At the time of privatisation, Qantas carried 14 million passengers. In 2018-19, this figure was almost 56 million passengers – a four-fold increase since privatisation (see Chart 5.3).

Chart 5.3 Number of domestic and international passengers carried by the Qantas Group over time



Source: Deloitte Access Economics using data from Qantas 2000 – 2019 and Qantas Prospectus 1995.

Since 1994, Qantas has adapted to a number of major structural changes in the industry including the privatisation of major capital city airports, the downturn in the US aviation sector following September 2011 and the exit of Ansett from the Australian market and entry of Virgin and Tiger.

At the same time, Qantas expanded its offering by launching Jetstar to provide a new low-cost carrier for the domestic market. Expanding its range of offering and routes to support budget travellers has ensured that the Qantas Group maintained approximately 65% of market share over this period⁷ despite the entry of competitors. At the same time, Jetstar quickly expanded to medium haul international routes.

Table 5.1 draws on financial information from the Qantas Prospectus at the time of privatisation to examine how the direct economic contribution of the Qantas Group has likely changed since 1994. The second column provides figures in 1994 dollars while the third column converts the economic contribution in 1994 to 2019 dollars to promote comparability.

Comparing the third and fourth columns, in real terms, gross operating surplus has doubled since 1994 although given passenger numbers have grown four times this suggests that gross operating surplus per passenger has essentially halved. Labour income has risen by a third in real terms, as has total value added.

Interestingly, direct employment is currently very similar to the levels at the time of privatisation. Given the rise in overall passenger numbers, this suggests that labour productivity has risen over time, driven at least in part by a range of technological developments in the industry.

⁷ The History of the Australian Aerospace Industry
 Jarryd Pfeiffer, Kelly Balnaves, Bradley Darlington, Micahel Cannizzo, Christian Rogers, Alex Hortsmann
 University of Adelaide 2007

Table 5.1 Direct economic contribution of Qantas Group operations (\$ billion)

| | 1994 (1994 dollars) | 1994 (2019 dollars) | 2019 |
|-------------------------|------------------------|------------------------|--------|
| Gross Operating Surplus | 0.8 | 1.6 | 3.1 |
| Labour Income | 1.7 | 3.1 | 4.2 |
| Value added | 2.5 | 4.7 | 7.3 |
| Employment (FTE jobs) | 26,631 | 26,631 | 25,394 |

Source: Deloitte Access Economics, Qantas Prospectus.

Table 5.2 shows the total economic contribution of the Qantas Group since privatisation including both the direct contribution associated with the labour income paid to Qantas Group employees and the Group’s gross operating surplus but also the indirect labour income and gross operating surplus of upstream suppliers.

Overall, the Qantas Group’s value added has increased by approximately 50% in real terms since 1994 with growth in gross operating surplus close to doubling. The quantum of employment supported by the Qantas Group is estimated to have fallen over time, although some caution should be exercised in interpreting indirect contribution to employment in 1994 as the Prospectus had more limited detail on purchases from upstream suppliers than Qantas data utilised for the purposes of the 2019 study.

Table 5.2 Total economic contribution of Qantas Group operations (\$ billion)

| | 1994 (1994 dollars) | 1994 (2019 dollars) | 2019 |
|-------------------------|------------------------|------------------------|--------|
| Gross Operating Surplus | 1.7 | 3.2 | 5.8 |
| Labour Income | 2.9 | 5.3 | 7.0 |
| Value added | 4.6 | 8.5 | 12.8 |
| Employment (FTE jobs) | 82,203 | 82,203 | 55,312 |

Source: Deloitte Access Economics, Qantas prospectus.

5.3 The impact of changes in domestic airfares on consumer welfare

Over the last two decades, the price of domestic airfares (in particular discounted airfares) has declined in real terms. This has helped support significant growth in travel volumes and created material gains in consumer welfare by making travel more affordable over time.

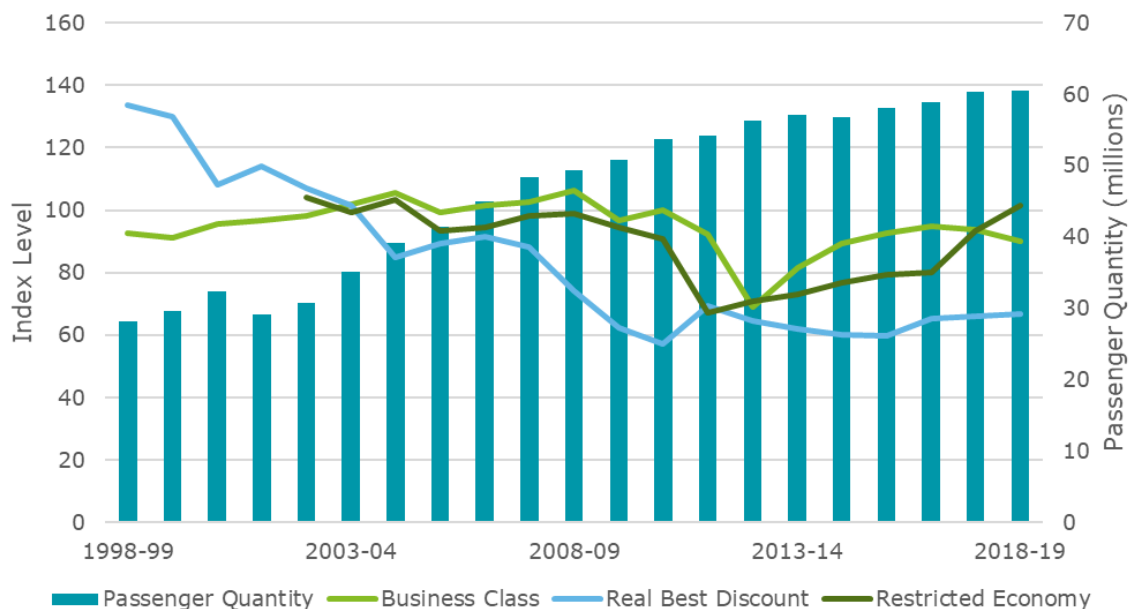
Chart 5.4 shows the evolution of three different price indices for domestic travel reported by BITRE which are indexed to 100 in 2003-04. The real best discount fare series captures the cheapest fare for each route excluding baggage surcharges while the restricted economy fare series captures fares with a degree of flexibility in terms of changing flight times. Further details on these categories are available from BITRE.⁸

Chart 5.4 indicates that over the last 20 years, business class fares have fallen by 3% in real terms and restricted economy fares have fallen by a similar amount over the period for which data is available. However, best discount fares have fallen dramatically – by around 50% over this period. At the same time, domestic passenger departures are estimated to have doubled over the

⁸ Department of Infrastructure, Transport, Cities and Regional Development – BITRE (2019b) Australian Domestic Air Fares Index, Real Best Discount and Real Business Class
https://www.bitre.gov.au/statistics/aviation/air_fares.aspx

same 20 years.⁹ While a deeper investigation would be required to determine what factors have driven this and the relative influence of different factors, this observation nonetheless suggests that the decline in real airfares has not only made travel more affordable but expanded access to domestic air travel.

Chart 5.4 Domestic air fare price indices and domestic passenger volumes over time



Source: Deloitte Access Economics using data from BITRE (2019a), BITRE (2019b)
 Note: Passenger quantity is based on passenger departures as BITRE data includes both arrivals and departures in estimates of passenger movements.

The decline in cost of discount airfares has coincided with the entrance of low cost-carrier to the Australian market, including Virgin Blue in 2000 but also Jetstar in 2003 and subsequently Tigerair. While Virgin has now shifted towards being a full service carrier, Jetstar has significantly grown its market share and become the major low cost carrier in Australia. Its expansion is likely to have played a material role in lowering the cost of discount airfares over time and in turn increasing access to air travel for Australian consumers.

5.3.1 What has lower airfares meant for consumers?

For consumers, the reduced cost of discount air fares has had two main benefits. First, it has made air travel affordable for those who previously may not have been able to afford to travel. Second, it has reduced the cost of travel for those who would otherwise have travelled by air but are now able to do so at a lower price.

One way of capturing the gains to consumers from a reduction in the price of air travel is to measure their change in consumer surplus. Consumer surplus refers to the difference between what consumers are willing to pay for a good or service (as a measure of the value they place on it) and the price they pay for it.

Chart 5.5 illustrates this graphically and provides a stylised indication of the gains in consumer surplus from lower airfares over the last 15 years. In 2004, the market was operating at a point shown by the light green dot with an average price of \$257¹⁰ and a volume of 35 million passenger

⁹ Department of Infrastructure, Transport, Cities and Regional Development – BITRE (2019a) Australian Domestic Airport Traffic Data https://www.bitre.gov.au/publications/ongoing/airport_traffic_data.aspx

¹⁰ This average price is expressed in \$2019 and was estimated by Deloitte Access Economics by applying growth in a weighted average of the real best discount and restricted economy BITRE indices to an estimate of average revenue per passenger in 2019. Given the way the BITRE indices are calculated, actual prices in 2004 are likely to differ from this figure.

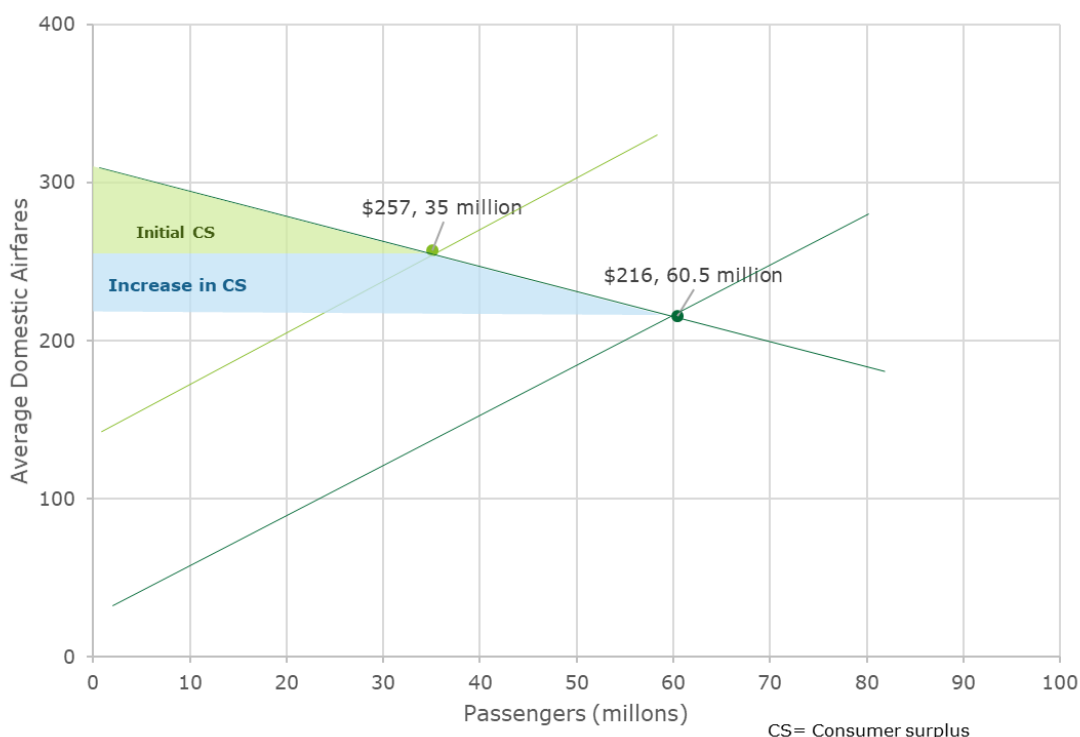
departures. The indicative consumer surplus from air travel in 2004 is shown by the light green shaded triangle.

In 2019, the market is now operating at the point shown by the dark green dot with a lower average price of \$216 per passenger¹¹ and 60.5 million passenger departures. At this new point, consumers are better off with the increase in consumer surplus shown by the blue area.

This stylised analysis suggests that the increase in consumer surplus could be around \$2 billion annually to consumers. Importantly, this difference accrues over time, with the cumulative gain in consumer surplus over the period since 2003-04 being substantially larger.

A reliable estimate would require more extensive analysis than that permitted here. In particular, commercial data on actual airfares from all airlines by route (to account for changing travel patterns) would need to be sourced and analysed to develop a more precise estimate of gains in consumer surplus over time.

Chart 5.5 Change in consumer surplus between FY 2004 and FY 2019



Source: Deloitte Access Economics analysis using data from BITRE (2019a) BITRE (2019b), Qantas (2019), Virgin (2019), Rex (2019)

¹¹ Deloitte Access Economics estimate of average industry revenue per passenger.

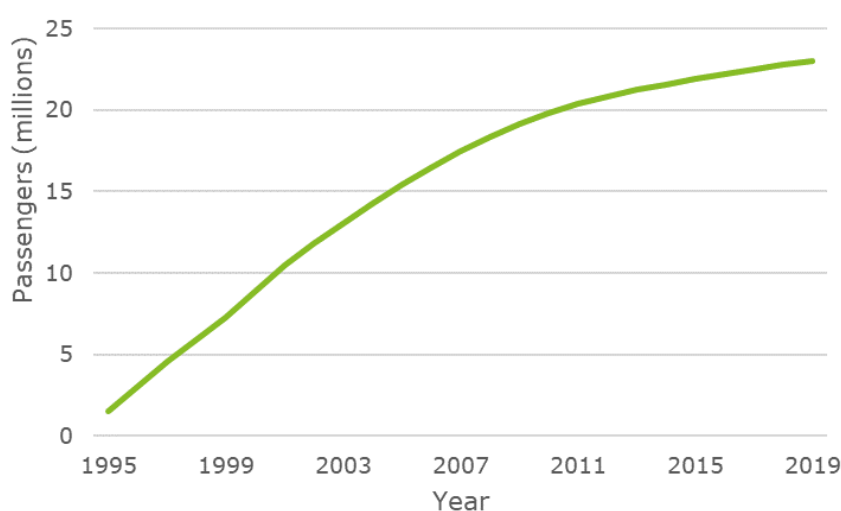
5.4 The economic contribution of the 747

The Boeing 747 has been a familiar fixture for Australians travelling overseas since it was introduced to the Qantas fleet in 1971. Since 1995 alone, Qantas Boeing 747s have completed over 330,000 flights and transported an estimated 89 million passengers to and from Australia.

Qantas was an early customer for the Boeing 747, ordering four aircrafts in 1967 with the first of these entering service in September 1971. In time, every major 747 variant would be operated by Qantas Airways at some point, including a period between 1978 and 1985 when they operated an all-747 fleet.¹²

In total, since 1995, Deloitte Access Economics estimates that almost 23 million international arrivals have come to Australia on Qantas Boeing 747 services (see Chart 5.6). While the volume travelling on the 747 was significant in the mid-1990s, it has fallen over time as Qantas has begun to transition to newer aircraft.

Chart 5.6 Estimated international arrivals in Australia on Qantas Boeing 747s since 1995



Source: Deloitte Access Economics analysis drawing on Qantas data.

Over its lifetime, however, the Boeing 747 has contributed significantly to the Australian economy through its role in transporting international visitors to Australia.

International tourism expenditure data was used to estimate the economic contribution of Qantas' Boeing 747s since 1995 drawing on both the State Tourism Satellite Accounts published by Tourism Research Australia and the ABS Tourism Satellite Account. The State Tourism Satellite Account data is only available from 2006-07 therefore estimates of the relationship between tourism consumption and value added prior to this date are assumed to be equal to that in 2006-07 for the purposes of this case study.¹³

Since 1995, **the cumulative economic contribution of international tourism expenditure facilitated by Qantas' Boeing 747 aircraft** is estimated to amount to approximately \$44 billion in value added in 2019 dollars. This represents an average of \$1.8 billion per year over this period. Of the cumulative contribution to value added, approximately \$22 billion was the result of direct spend in tourism-related industries while the remaining \$22 billion reflected indirect value added for upstream suppliers to the tourism sector.

¹² Australian Aviation (2018), *Long may she reign – Qantas to retire the Boeing 747*.
<https://australianaviation.com.au/2018/07/qantas-to-retire-the-boeing-747-in-2020/>

¹³ The ABS Tourism Satellite Accounts are available prior to 2006-07. An analysis of these indicated that the ratio of direct tourism value added to consumption for international visitors in prior years remained similar to that in 2006-07.

5.5 The role of the Qantas Group in facilitating air freight exports

The Qantas Group plays a critical role in transporting freight nationally and internationally, both through the major ports and through supporting interstate and international freight exports from regional areas and Northern Australia.

Australian airfreight represented 21.5 per cent of the total value of freight imports and exports in 2017-18 but less than 1 per cent of total volume.¹⁴ Air freight exports were estimated to be worth \$43.1 billion in 2018-19. While the precise value of air freight exports carried by Qantas is unknown, data from BITRE indicates that Qantas carried approximately 64,000 tonnes or 11 per cent of total outbound air freight in 2018-19.¹⁵ If the air freight exports carried by Qantas had a similar value per tonne to the industry average, this suggests the value of air freight carried by Qantas would be approximately \$4.8 billion in 2018-19.

In 2018-19, Qantas facilitated a total of 100,000 tonnes of domestic air freight. Data from BITRE indicates that the total domestic air freight volume was 234,000 tonnes which suggests that Qantas facilitates around 43 per cent of total domestic air freight movements in Australia. This higher share in the domestic freight market is consistent with its higher share of domestic passenger movements. Overall, Qantas accounts for approximately 18 per cent of total Australian airfreight movements, both international and domestic.

Qantas Freight supports business in a number of regions, including Northern Australia. Many regional areas including those in Northern Australia rely on Qantas to ensure connectivity to domestic and international markets. In 2018-19, Qantas facilitated 169 tonnes of air freight exports in Northern Australia, which assuming a similar value per tonne to the industry average, would be valued at approximately \$54 million. In addition to facilitating exports from Northern Australia, Qantas is estimated to have facilitated approximately 700 tonnes of air freight imports, highlighting its role in enhancing connectivity for the region.

¹⁴ Infrastructure Partnerships Australia, Oxford Economics, *International Airfreight Indicator* (2019). <<https://infrastructure.org.au/wp-content/uploads/2019/03/2019-International-Airfreight-Indicator-digital.pdf>>.

¹⁵ The Qantas market share was estimated from BITRE, *International Airline Activity—Time Series* (2020). <https://www.bitre.gov.au/publications/ongoing/international_airline_activity-time_series>.

Appendix A: Estimating the economic contribution of the Qantas Group

Background

Deloitte Access Economics was commissioned by the Qantas Group to examine the Qantas Group's contribution to the Australian economy. This report estimates the economic contribution of the Qantas Group at both the national, state and regional level in terms of value added and employment (FTE). Results are also disaggregated across the Qantas Group's business units of Qantas, Jetstar and Qantas Freight.

Economic contribution studies provide a snapshot of the contribution of a firm or industry at a particular point in time. The analysis uses common financial measures, such as revenue and cost of goods sold, to estimate a firm's direct value added to the Australian economy. Direct value added is calculated using the income approach to GDP, which builds up the value of a firm or sector's output by adding the returns to capital (measured in terms of GOS) and the returns to labour (measured as wages paid). That is, it estimates the total income generated, net of costs, through the activities of the entity being modelled.

While revenue is more commonly reported in financial accounts, direct value added provides a more accurate assessment of a firm's contribution to the overall economy because it nets out the value that is created by upstream industries. The direct contribution, therefore, isolates the value *created* by the Qantas Group. This approach is consistent with the framework used by the Australian Bureau of Statistics (ABS) in compiling the *Australian National Accounts*.

In addition to this direct component, economic contribution studies consider the interlinkages with other sectors of the economy through expenditure on intermediate inputs. This expenditure drives the indirect contribution to value added and is determined through Deloitte Access Economics' Regional Input-Output Model (DAE-RIOM).

Measuring the indirect contribution involves measuring the indirect or flow-on contribution of the Qantas Group's activities. This is the value added generated in upstream sectors of the economy that produce inputs to the airline's operation. The flow-on contribution is based on the Qantas Group's expenditure in these industries and the profit and wages that are generated as a result. A more detailed description of the methodology of economic contribution studies is provided in Appendix B.

Data provided by the Qantas Group

Qantas has provided Deloitte Access Economics with detailed profit and loss data for FY19. This data was disaggregated by the following business units:

- Qantas (incorporating domestic and international operations)
- Jetstar
- Qantas Loyalty
- Freight
- Corporate
- Unallocated/eliminated.

The revenue and expenditure numbers for Qantas Loyalty were aggregated with values from Qantas and are not analysed separately. While Qantas Loyalty generates substantial revenue through its own operations, the profitability of this business unit is determined primarily by

demand for Qantas Points. This demand is closely tied to the overall performance of Qantas and it is, therefore, appropriate to aggregate these two business units.

The Corporate division's revenue and expenditure has been distributed across Qantas, Jetstar and Qantas Freight. The corporate division contributes to the organisation by providing strategic advice, managing finances and providing human resourcing support. While these functions are integral to any firm, the benefits and revenue associated with such services are accrued through other business units. As the revenue is accrued by these business units, the costs should also be distributed so as to accurately reflect the intermediate inputs required to generate revenue. As such, the costs of the corporate business unit have been distributed as per advice from Qantas, with 72% of costs being allocated to Qantas, Jetstar being allocated 22% and Freight 6%.

In determining the Qantas Group's indirect contribution to the Australian economy, expenditure on intermediate inputs has been allocated between expenditure occurring within Australia and that occurring internationally. The majority of the Qantas Group's expenditure on intermediate expenditure occurs in Australia, with more than half of its intermediate inputs sourced locally. The majority of the expenditure on inputs from outside Australia is attributable to jet fuel, commissions and selling costs and aircraft operating lease rentals.

Methodology for calculating economic contribution by state

The economic contribution of the Qantas Group by state has been determined by distributing the GOS generated by the company in Australia by passenger departure data. This departure data was disaggregated by Qantas and Jetstar and a weighted average of the two was used to distribute value added for Qantas Freight. The direct labour income was allocated to states based on their respective share of employment by business unit. Since direct value added includes both labour income and GOS, the relative share of states in direct value added will reflect a combination of their employment share and passenger share.

Similarly, the Qantas Group's expenditure on intermediate inputs is distributed by each state's estimated relevant industry share. For example, as NSW accounts for 32% of total activity in the transport and support services industry in Australia, this same share of the Qantas Group's expenditure on transport and support services is distributed to NSW. While this does not directly capture the geographical dispersion of the Qantas Group's activities (which would require more detailed purchase data), it is a relatively accurate approximation of this dispersion in lieu of this data.

The expenditure on intermediate inputs drives the indirect contribution for each state. In determining the contribution to value added and employment driven by the company's expenditure on intermediate inputs, Deloitte Access Economics has disaggregated the national Input-Output (IO) table for each individual state. This ensures that the industry structure of each state is accurately described, and the relevant economic activity is captured.

Appendix B: Economic contribution approach

Economic contribution studies are intended to quantify measures, such as value added, exports, imports and employment associated with a given industry or firm, in a historical reference year. The economic contribution is a measure of the value of production by a firm or industry.

All direct, indirect and total contributions are reported in terms of GOS, labour income, value added and employment (with these terms defined in 0).

Definitions of economic contribution estimates

| Estimate | Definition |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GOS | GOS represents the value of income generated by the entity's direct capital inputs, generally measured as the earnings before interest, tax, depreciation, and amortisation (EBITDA). |
| Labour income | Labour income is a subcomponent of value add. It represents the value of output generated by the entity's direct labour inputs, as measured by the income to labour. |
| Value added | Value added measures the value of output (i.e., goods and services) generated by the entity's factors of production (i.e., labour and capital) as measured in the income to those factors of production. The sum of value added across all entities in the economy equals GDP. |
| Employment (FTE) | Employment is a fundamentally different measure of activity to those above. It measures the number of workers (measured in FTE terms) that are employed by the entity, rather than the value of the workers' output. |
| Direct economic contribution | The direct economic contribution is a representation of the flow from labour and capital committed in the economic activity. |
| Indirect economic contribution | The indirect contribution is a measure of the demand for goods and services produced in other sectors as a result of demand generated by economic activity. |
| Total economic contribution | The total economic contribution to the economy is the sum of the direct and indirect economic contributions. |

Source: Deloitte Access Economics.

Definitional notes

When calculating the GOS for a typical for-profit firm or industry, income streams from government (such as transfers or production subsidies) are excluded as they are a transfer of public funds, not reflective of income generated by the activities of the firm or industry.

Similarly, value added is typically calculated as GOS, plus labour income net of subsidies under the ABS Australian System of National Accounts (ABS 2013):

A subsidy on a product is a subsidy payable per unit of a good or service. An enterprise may regard a subsidy as little different from sales proceeds. However, in the national accounts, subsidies are regarded as transfer payments from general government, enabling enterprises to sell their output for less than would otherwise be the case.

Value added

The measures of economic activity provided by this contribution study are consistent with those provided by the ABS. For example, value added is the contribution the sector makes to total factor income and GDP.

There are a number of ways to measure GDP, including:

- **Expenditure approach**—Measures expenditure: of households, on investment, government and net exports and
- **Income approach**—Measures the income in an economy by measuring the payments of wages and profits to workers and owners.

Below is a discussion on measuring the value added by an industry using the income approach.

Measuring the economic contribution—income approach

There are several commonly used measures of economic activity, each of which describes a different aspect of an industry's economic contribution:

- **Value added** measures the value of output (i.e., goods and services) generated by the entity's factors of production (i.e., labour and capital) as measured in the income to those factors of production. The sum of value added across all entities in the economy equals GDP. Given the relationship to GDP, the value added measure can be thought of as the increased contribution to welfare.

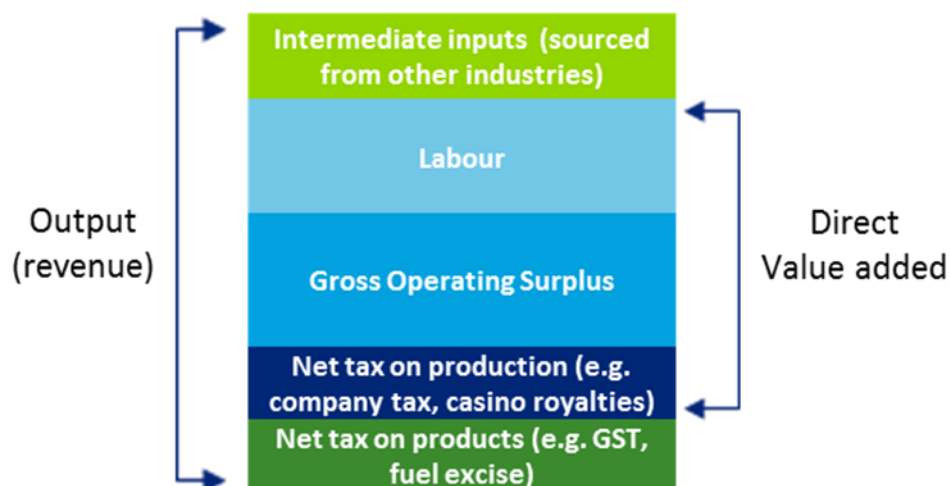
Value added is the sum of:

- GOS represents the value of income generated by the entity's capital inputs, generally measured as the earnings before interest, tax, depreciation and amortisation (EBITDA).
- Tax on production, less subsidy provided for production. Note: Given the manner in which returns to capital before tax are calculated, company tax is not included or this would double-count that tax. In addition, it excludes goods and services tax, which is a tax on consumption (i.e., levied on households).
- Labour income is a subcomponent of value added. It represents the value of output generated by the entity's direct labour inputs, as measured by the income to labour.

Figure A.1 shows the accounting framework used to evaluate economic activity, along with the components that make up *output*. Output is the sum of value added and the value of intermediate inputs used by the firm or industry.

The value of intermediate inputs can also be calculated directly by summing up expenses related to non-primary factor inputs.

Figure A.1 Economic activity accounting framework



Source: Deloitte Access Economics.

Contribution studies generally estimate employment contributed by a sector. Employment is a fundamentally different measure of activity to those above. It measures the number of workers that are employed by the entity, rather than the value of the workers' output.

Direct and indirect contributions

The **direct** economic contribution is a representation of the flow of labour and capital in the entity.

The **indirect** contribution is a measure of the demand for goods and services produced in other sectors as a result of demand generated by the direct economic activity of the entity. Estimation of the indirect economic contribution is undertaken in an IO framework using ABS IO tables which report the inputs and outputs of specific sectors of the economy (ABS 2013).

The total economic contribution to the economy is the sum of the direct and indirect economic contributions.

Limitations of economic contribution studies

While describing the geographic origin of production inputs may be a guide to a firm or industry's linkages with the local economy, it should be recognised that these are the type of normal industry linkages that characterise all economic activities.

Unless there is unused capacity in the economy (such as unemployed labour), there may not be a strong relationship between a firm's economic contribution as measured by value added (or other static aggregates) and the welfare or living standard of the community. The use of labour and capital by demand created from the industry comes at an opportunity cost as it may reduce the amount of resources available to spend on other economic activities. This is not to say that the economic contribution, including employment, is not important. As stated by the Productivity Commission in the context of Australia's gambling industries: (Productivity Commission 1999):

Value added trade and job creation arguments need to be considered in the context of the economy as a whole ... income from trade uses real resources, which could have been employed to generate benefits elsewhere. These arguments do not mean that jobs, trade and activity are unimportant in an economy. To the contrary they are critical to people's well-being. However, any particular industry's contribution to these benefits is much smaller than might at first be thought, because substitute industries could produce similar, though not equal gains.

In a fundamental sense, economic contribution studies are simply historical accounting exercises. No 'what-if,' or counterfactual inferences—such as 'what would happen to living standards if the firm or industry disappeared?'—should be drawn from them.

The analysis—as discussed in the report—relies on a national IO table modelling framework and there are some limitations to this modelling framework. The analysis assumes that goods and services provided to the sector are produced by factors of production that are located completely within the state or region defined and that income flows do not leak to other states.

The IO framework and the derivation of the multipliers also assume that the relevant economic activity takes place within an unconstrained environment. That is, an increase in economic activity in one area of the economy does not increase prices and subsequently crowd out economic activity in another area of the economy. As a result, the modelled total and indirect contribution can be regarded as an upper-bound estimate of the contribution made by the supply of intermediate inputs.

Similarly, the IO framework does not account for further flow-on benefits as captured in a more dynamic modelling environment like a Computable General Equilibrium (CGE) model.

IO analysis

IO tables are required to account for the intermediate flows between sectors. These tables measure the direct economic activity of every sector in the economy at the national level. Importantly, these tables allow intermediate inputs to be further broken down by source. These detailed intermediate flows can be used to derive the total change in economic activity associated with a given direct change in activity for a given sector.

A widely used measure of the spill-over of activity from one sector to another is captured by the ratio of the total to direct change in economic activity. The resulting estimate is typically referred to as 'the multiplier.' A multiplier greater than 1 implies some indirect activity, with higher multipliers indicating relatively larger indirect and total activity flowing from a given level of direct activity.

The IO matrix used for Australia is derived from the ABS 2016–17 IO tables, the latest available IO data at the time of the analysis. The industry classification used for IO tables is based on the Australian and New Zealand Standard Industrial Classification, with 114 sectors in the modelling framework.

Appendix B: Facilitated tourism contribution

Noting the vital role the Qantas Group plays in facilitating Australia’s tourism industry, this analysis has also evaluated the economic contribution made through the Qantas Group’s role in facilitating both domestic and international tourism.

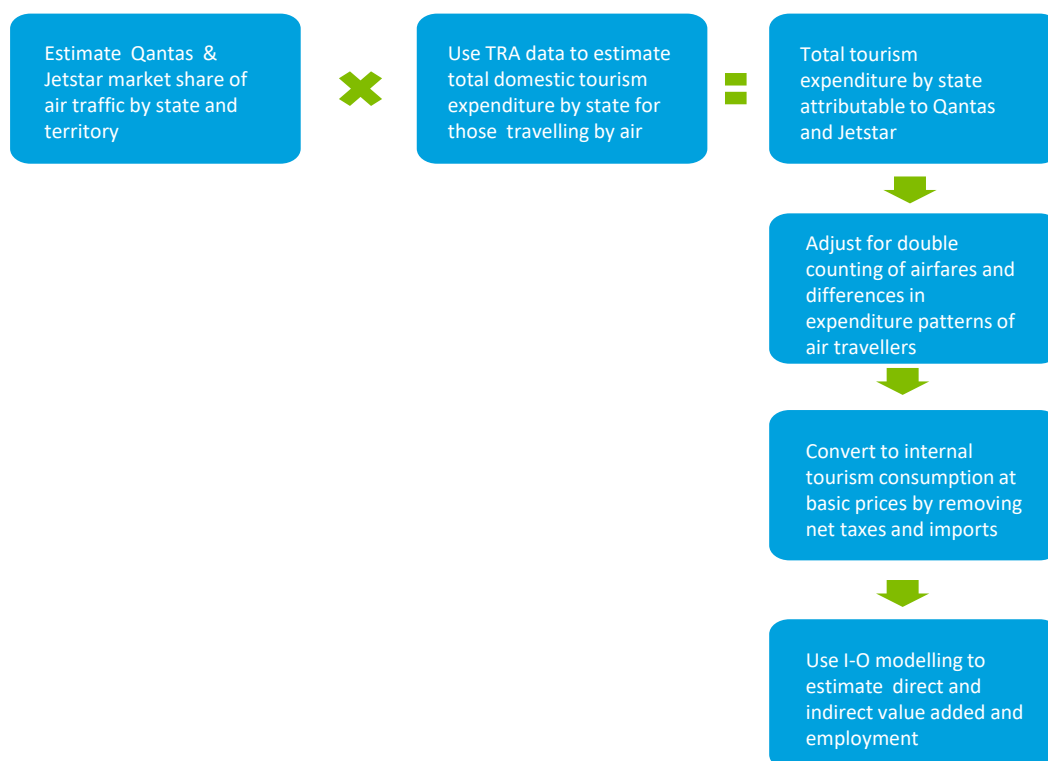
Methodology for calculating the facilitated contribution of domestic tourism

Figure C.1 provides an overview of the process used to estimate the economic contribution of domestic tourism expenditure facilitated by the Qantas Group. In the first stage, market share information by route provided by the Qantas Group was matched to data on passenger numbers on each route from the Bureau of Infrastructure, Transport and Regional Economics (BITRE). This was used to calculate estimates of passenger numbers carried by Qantas and Jetstar on each route.

For the state and territory analysis, routes were aggregated to a state or territory level by attributing half the traffic on a route pair to each state. For example, 50% of traffic on the Sydney to Melbourne route was attributed to NSW and 50% to Victoria. This was then used to estimate a market share of all aviation related travel carried by Qantas and Jetstar by state, separately for both interstate and intrastate travel.

In the second stage, to calculate state level expenditure, information on average expenditure per night from the TRA National Visitor Survey (2017) was combined with other data from TRA on visitor numbers travelling interstate and intrastate by air.

Overview of methodology for estimating the domestic tourism contribution



Source: Deloitte Access Economics

In the third stage, estimates of market shares by state are multiplied by total tourism expenditure for air travellers (calculated in the second stage) to develop estimates of total tourism expenditure attributable to Qantas and Jetstar for both interstate and intrastate travel.

For the regional analysis, routes were aggregated to a regional level by aggregating passenger flows to each airport within the region. To calculate regional expenditure, information on average expenditure per night from the TRA National Visitor Survey (2017) was combined with other data from TRA on visitor numbers and visitor nights for those travelling interstate and intrastate by air.

This data is then subject to some further adjustments in the fourth stage to ensure it is consistent with the expenditure profile of airline travellers, noting that expenditure estimates are based on all domestic tourists not just airline travellers.

- First, all expenditure on domestic airfares is excluded to avoid double-counting expenditure already included in the economic contribution of the Qantas Group.
- Second, expenditure on vehicle maintenance and repairs is excluded on the basis that this is more likely to be incurred by those on driving holidays.
- Finally, expenditure on fuel is reduced to the average amount per day incurred by international tourists as those travelling by air are expected to spend less on fuel than those travelling to a destination by car. These assumptions are likely to be conservative because it is likely that air travellers have a higher average expenditure per night than those travelling by car or bus.

The next stage involves adjusting tourism expenditure, which is recorded in purchaser prices to internal tourism consumption at basic prices by removing the impact of imports and net taxes on production and adjusting for imputed consumption. Finally, input-output modelling, which draws on the State Tourism Satellite Accounts published by Tourism Research Australia is used to estimate direct and indirect value added and employment.

Methodology for calculating the facilitated contribution of international tourism

A similar procedure was used to estimate the economic contribution of international tourism facilitated by the Qantas Group. The various stages in this process are outlined in Figure C.2 below.

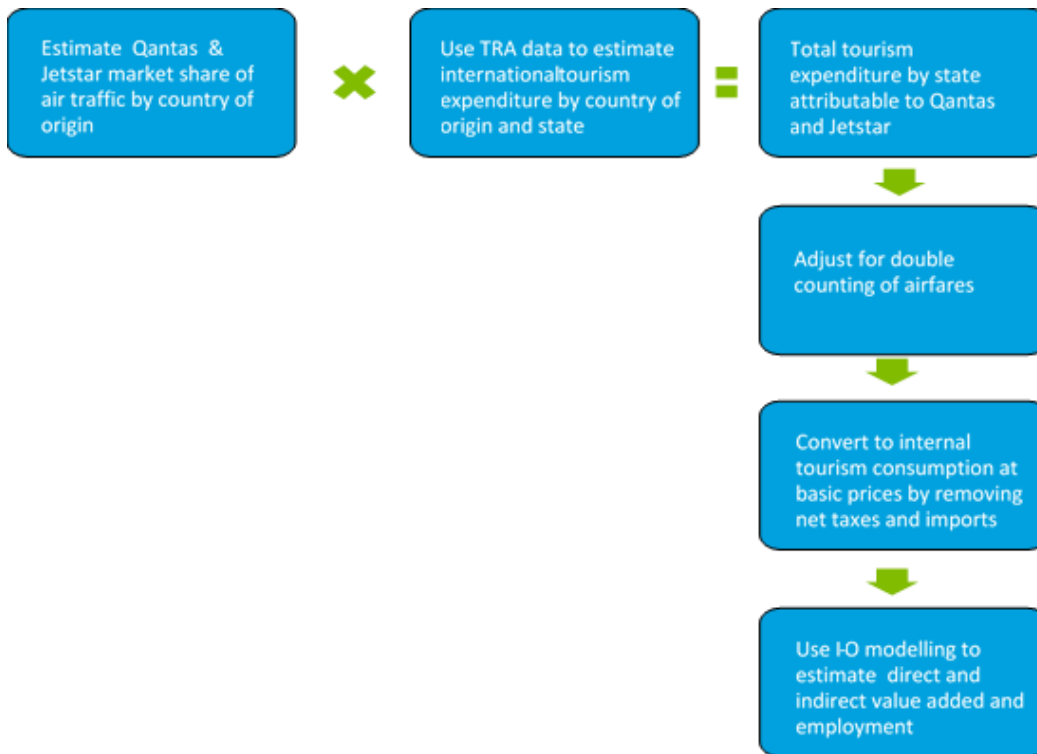
Estimating the market share of Qantas and Jetstar is more complicated in the case of international tourism. While BITRE has information on airline travel by route, this does not map neatly to country of origin for some countries and does not account for differences in the ratio of foreign to local residents carried by different airlines.

The market share of Qantas and Jetstar by country of origin was estimated by using airline share data by country of origin reported by Tourism Research Australia.

In the second stage, this data was multiplied by estimates of expenditure (excluding prepaid airfares and package tours) by country of origin for inbound tourist arrivals for each state and region from TRA. The resulting estimates reflect the total international tourism expenditure for each state attributable to tourists travelling on Qantas or Jetstar.

The next stage involves adjusting this expenditure to exclude expenditure on international and domestic airfares in Australia to avoid double counting any expenditure included as part of the economic contribution of the operations of the Qantas Group. As for the domestic tourism expenditure, this was then converted to tourism consumption at basic prices and then converted to estimates of direct and indirect value added and employment using multipliers derived from the State Tourism Satellite Accounts.

Overview of methodology for estimating the international tourism contribution



Source: Deloitte Access Economics

Limitation of our work

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Deloitte Access Economics Pty Ltd
ACN 149 633 116
Grosvenor Place
225 George Street
Sydney, NSW, 2000
Australia

Phone: +61 2 9322 7000
www.deloitte.com.au

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