



**Economic contribution of Sydney  
Airport 2019**

Sydney Airport

February 2021

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# Glossary

<b>Acronym</b>	<b>Full name</b>
ABS	Australian Bureau of Statistics
ASIC	Australian Security Identity Cards
BITRE	Bureau of Infrastructure, Transport and Regional Economics
CAGR	Compound Annual Growth Rate
DAE-RIOM	Deloitte Access Economics Regional Input-Output Model
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
FTE	Full Time Equivalent
GDP	Gross Domestic Product
GOS	Gross Operating Surplus
GSP	Gross State Product
IO	Input-Output
IVS	International Visitor Survey
NSW	New South Wales
NVS	National Visitor Survey
STSA	State Tourism Satellite Account
The Airport	Sydney Airport
TRA	Tourism Research Australia

# Executive summary

This report provides the outcomes from Deloitte Access Economics' analysis of the economic contribution of Sydney Airport (the Airport) to the Australian economy in 2019.

Sydney Airport is a cornerstone of Australia's commercial aviation industry: in 2019, it hosted more than 44.4 million passengers – more than a quarter of the nation's total – from 324,100 aircraft movements and facilitated the export of 213,600 tonnes of international airfreight.

This study is an update to the Deloitte Access Economics report *Economic contribution of Sydney Airport, 2017* (2018). Overall, activity levels (both landside and airside) at Sydney Airport have grown since 2017. That said, growth in facilitated trade (freight and tourism exports) has been stronger than growth in activity in the precinct itself. This is consistent with the recent historical trend of performance of the tourism sector exceeding that of the broader economy and is also a reflection of a sizable increase in the value of goods exported from Sydney Airport.

## Total contribution of Sydney Airport

The total economic contribution of the Sydney Airport precinct in 2019 – encompassing both the direct and indirect components – can be summarised as follows:

- The activities of businesses operating within the Sydney Airport precinct *generated* an estimated **\$11.3 billion in value added, with associated employment of 56,600 full time equivalent (FTE) jobs**; this represents a 5.5% increase and a 1.4% fall, respectively, since 2017.<sup>1</sup>
- The contribution of tourism and freight *facilitated* by the Airport is equivalent to a further **\$30.7 billion in value added and generated an estimated 279,800 FTE jobs**; this represents a 12.5% increase and a 0.5% fall, respectively, since 2017.<sup>2</sup>

In aggregate, in 2019, the activities of the Sydney Airport precinct generated or facilitated a total of **\$42.0 billion in value added and 336,400 FTE jobs**.

Relative to the economy more broadly, this represents **2.1% of Australia's Gross Domestic Product (GDP)** and, noting that some of this activity occurs outside of New South Wales (NSW), this is equivalent to 6.7% of NSW's Gross State Product (GSP).

## The contribution of facilitated international services

In 2019, Sydney Airport facilitated an estimated 41% of Australia's 9.5 million international visitors arrivals and around 213,000 tonnes of freight exports. In aggregate, facilitated international trade activity (tourism and freight exports) at Sydney Airport contributed **\$28.3 billion in total value added** and supported **253,500 FTE jobs**.

When the generated and facilitated international economic contribution estimates are combined with air traffic and passenger data (BITRE 2020 and TRA 2020), it is estimated that, in 2019:

- A typical daily international service contributed \$130 million in value added and supported an estimated 1,200 FTE jobs in Australia
- Comparatively, an A380 daily service from China contributed \$632 million in value added and supported an estimated 6,000 FTE jobs. Services from China contributed notably more value added per flight due to high load factors and above average visitor spending per passenger.
- An A380 daily service from the United Kingdom contributed \$89 million in value added and supported an estimated 800 FTE jobs.

<sup>1</sup> The fall in employment is a reflection of ongoing improvements in labour productivity as a result of technological advances and other efficiency drivers, a move to a more flexible or casualised workforce to ensure labour can be responsive to demand fluctuations, and growing employment of lower cost, often offshore contractors or service providers.

<sup>2</sup> The growth in value added is largely driven by a 23% increase in value of freight exports through Sydney Airport since 2017 (BITRE 2020), in part, due to the falling Australian dollar between 2017 and 2019.

### The contribution of facilitated domestic capital city and regional services

Deloitte Access Economics also estimated the economic contribution of facilitated domestic tourism through Sydney Airport, disaggregated by capital city and regional aviation services.<sup>3</sup> In aggregate, Deloitte Access Economics estimates that the **domestic aviation services** facilitated by Sydney Airport contributed **\$2.3 billion in total value added** and supported **26,300 FTE jobs** in 2019. Of this, facilitated capital city services contributed \$2.0 billion in total value added and supported 22,900 FTE jobs, while facilitated regional services contributed \$300 million in value added and 3,400 FTE jobs.

### Contribution to household income and employment

The activities of the Sydney Airport precinct directly generated or facilitated \$14.8 billion in household income, rising to a total of \$22.5 billion when including indirect contributions.<sup>4</sup>

In aggregate, in 2019, total employment generated or facilitated by Sydney Airport represents **3.0% of total Australian employment** and, noting that some of this employment occurs outside the state, is equivalent to 9.5% of NSW FTE employment.

### Sydney Airport's economic contribution summary, 2017 to 2019

Table i summarises the progression of the Airport's economic contribution between 2017 and 2019.

Table i Economic contribution summary, 2017 to 2019

Measure	2017	2019	Description
Direct precinct value added	\$6.2b	\$6.6b	Sydney Airport precinct value added has increased by \$400m since 2017
Direct precinct employment	30,900	31,300	Precinct employment has increased 1.3% since 2017
Total value added	\$38.0b	\$42.0b	The value added generated or facilitated by Sydney Airport is equivalent to 6.7% of NSW GSP
Total employment	338,500	336,400	The number of FTE jobs directly or indirectly generated or facilitated by Sydney Airport is equivalent to 9.5% of NSW employment
Household income	\$19.9b	\$22.5b	The total economic activity generated or facilitated by Sydney Airport contributes \$22.5 billion to household incomes
Wages	\$85,400	\$87,300	The average FTE wage of an employee working on the Sydney Airport precinct is in line with the NSW average

Source: Deloitte Access Economics, ABS.

The quantum of these figures, particularly in comparison to the broader NSW and Australian economies, demonstrates the significance of the Sydney Airport precinct and its role in facilitating trade across Australia and internationally.

### Deloitte Access Economics

<sup>3</sup> Regional aviation services have been defined here to encompass all services outside of the capital cities.

<sup>4</sup> Household income is a component of value added; these two metrics are not additive.

# 1 Introduction

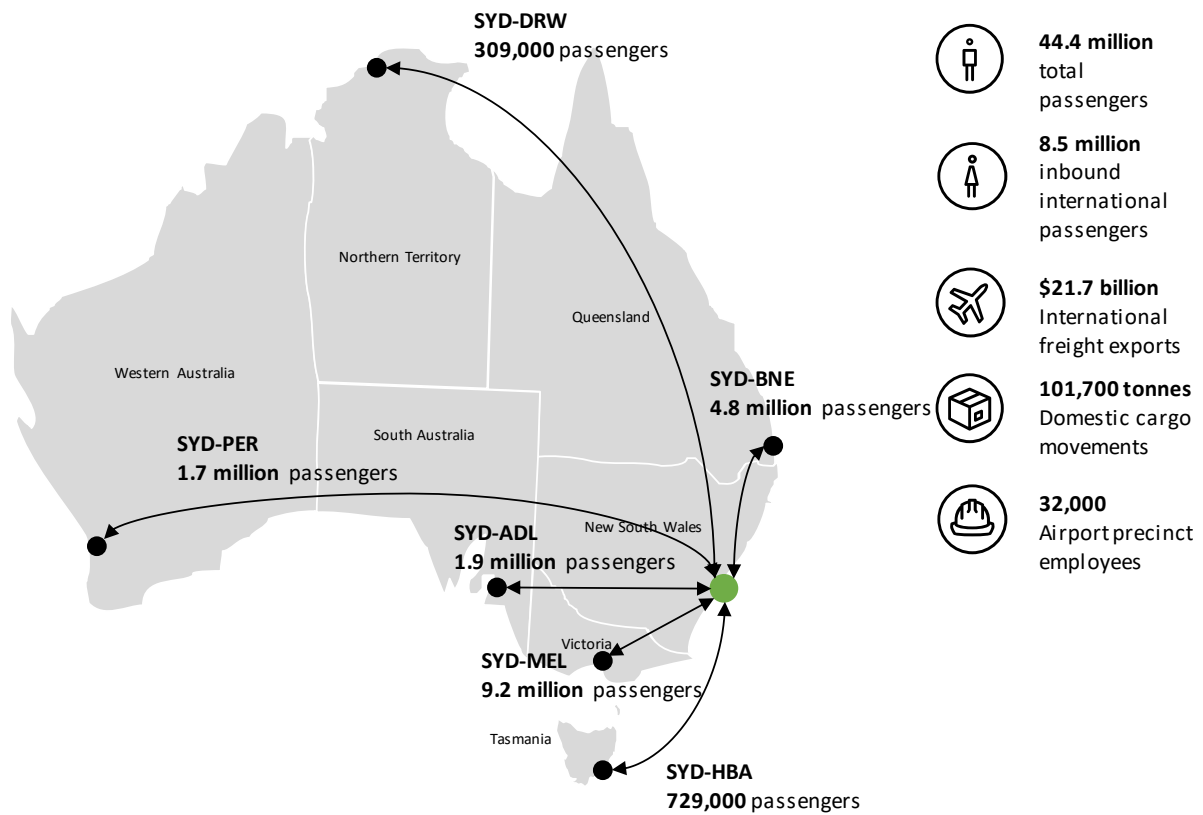
This report presents estimates of the economic contribution of Sydney Airport (the Airport) to the Australian economy, for the 2019 calendar year. This study is an update to the Deloitte Access Economics (2018) report, *Economic contribution of Sydney Airport, 2017* (2018). This report is intended to support Sydney Airport in its communications with stakeholders – including all levels of government, airport workers and employees, the local community, the media and not-for-profit organisations – about the significant economic contribution of the Sydney Airport precinct and the facilitated trade from tourism and freight exports.

## 1.1 The economic role of Sydney Airport

Sydney Airport is central to not only to Australia’s commercial aviation industry, but also to the country’s overall economic prosperity. The Airport plays a strategic role in connecting individuals, facilitating trade activity and providing services. Fundamentally, the role of the Airport captures the operational ‘core’, which comprises the central operation of the Airport facility, including its runway infrastructure, terminals and critical aviation safety and security. However, this core activity is a subset of the broader activity that occurs on the Airport precinct, including airline operations, retail and tourism services and landside transport and logistics.

Sydney Airport is Australia’s largest and busiest, moving more domestic and international passengers than any other airport in Australia. It is vital for connecting Australians and facilitating international and domestic freight (Figure 1.1).

Figure 1.1: Sydney Airport passengers, freight and employees, 2019



Source: Deloitte Access Economic, BITRE, Sydney Airport Annual Report 2019.

### **The economic activity generated at Sydney Airport precinct**

The most prominent on-airport operations are the domestic and international passenger airlines' activities including catering, baggage handling, maintenance, and refuelling. Yet the majority of businesses generating economic activity at Sydney Airport are not immediately involved in regular passenger transport aviation, including:

- onsite retail, such as newsagencies, clothing and duty-free stores
- precinct hospitality, including accommodation and on-site food and beverage options
- ground transport, including terminal shuttle buses and taxi services
- security and other government services, including customs, police and security contractors
- dedicated freight and logistics business
- other corporate/office-based businesses.

All these activities are captured in the contribution study as part of the Sydney Airport precinct – a consistent approach to the 2017 analysis.

### **Trade flows facilitated by the Airport**

In 2019, Sydney Airport hosted 8.5 million passengers on inbound international services, and facilitated an attributable 4.1 million international visitors (across inbound, outbound and domestic flights). These visitors spend money during their stay, and this tourism 'service', while consumed in Australia, is an export for the Australian economy.

Sydney Airport also hosted 27.5 million domestic passengers (both inbound and outbound passengers) and facilitated an attributable 6.1 million domestic visitors in 2019. Attributable domestic visitation, while not explicitly an export, forms part of the economic contribution of Sydney Airport activity. Overall, Sydney Airport facilitated international and domestic visitors collectively spent an attributable \$15.9 billion in 2019.

Moreover, in 2019, 213,600 tonnes of goods were exported from Sydney Airport, valued at \$21.7 billion. Again, as with visitors, the Airport plays a critical role in facilitating the delivery of Australian commodities to overseas markets. Facilitated visitors and freight through Sydney Airport are both captured in the contribution study as part of the Airport's activity, using a consistent framework to the 2017 analysis.

## **1.2 Report structure**

The structure of the report is as follows:

- Section 2.1 – presents the outcomes of the economic contribution analysis for the Sydney Airport precinct, capturing the value added and employment contribution of Sydney Airport and onsite businesses operating within the airport precinct
- Section 2.2 – presents outcomes of the economic contribution analysis of facilitated trade – passengers and freight – at Sydney Airport
- Section 2.3 – summarises the combined total economic activity generated or facilitated by Sydney Airport
- Section 2.4 – provides a high level analysis of the economic contribution of a stylised daily international service.

## 2 Economic contribution of Sydney Airport

The economic contribution of Sydney Airport is captured through a variety of measures. These include the economic activity of the businesses operating within the Airport precinct and the economic activity generated by the tourism and trade flows the Airport facilitates.

### 2.1 Economic contribution of Sydney Airport precinct

#### Direct contribution

The direct contribution of Sydney Airport precinct captures the value of 'core' and 'precinct' activities. Operational core activities comprise the central operation of an airport facility as captured by the financials of Sydney Airport. Precinct activities refer to activities by businesses other than the Airport that occur on the airport precinct including retail and tourism services, headquartered airline operations, general aviation and aircraft maintenance, transport, activities by Airservices Australia, Australian Border Force and broader non-aeronautical commercial activities.

In 2019, Sydney Airport precinct directly generated **\$6.6 billion in value added, employing around 31,300 FTE employees**. The direct value added includes the business operations of Sydney Airport itself, as well as the array of businesses operating within the precinct.

#### Indirect contribution

Through the purchase of inputs, Sydney Airport contributes to employment and economic activity outside the Airport precinct. For example, a food and beverage outlet will use wholesale food, electricity, and water in their food preparation process, plus technical services for their equipment maintenance, and financial services for bookkeeping. This upstream demand for goods and services contributes to jobs and growth in the broader national economy, resulting in an indirect contribution.

In 2019, the Sydney Airport precinct indirectly contributed **\$4.6 billion to national value added** and supported approximately **25,400 FTE jobs** across the economy. The indirect component comprises 41% of the Airport's total contribution, reflecting the value of economic activity that Sydney Airport helps support through its linkages with other sectors of the economy.<sup>5</sup>

#### Total contribution

In total, the Sydney Airport precinct contributed **\$11.3 billion in value added and supported 56,600 FTE jobs**. Noting that some of this activity would accrue outside the state, this is equivalent to around 1.6% of FTE employment in NSW.

### 2.2 Facilitated tourism and freight

Sydney Airport, as one of Australia's major international and domestic gateways, plays an important role in supporting trade. Given Australia's size, the geographical dispersion of tourist destinations, and distance from major trading partners, Sydney Airport is critical in facilitating both tourism and freight. Appendix B provides details on the framework for estimating Sydney Airport's contribution from facilitated trade.

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<sup>5</sup> The latest available input-output tables (2018-2019) were used to estimate the indirect contribution of the airport precinct. It is noted that despite this, the indirect to direct contribution remains consistent with previous economic contribution studies.



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### 2.2.1 Facilitated tourism

In 2019, an estimated 41% of Australia's 9.5 million international visitors arrived via Sydney. Overall, Sydney Airport facilitated an estimated 123 million international visitor nights in Australia – and when expenditure in other states and territories by visitors who used Sydney Airport is taken into account – an estimated \$12.8 billion in international tourism expenditure was facilitated by Sydney Airport in 2019.

Sydney Airport also facilitated an estimated 19.9 million domestic visitor nights in NSW in 2019, with an average nightly spend of \$160. Consequently, expenditure from domestic visitors to NSW who arrive via Sydney Airport was \$3.2 billion in 2019.

In 2019, tourism activity facilitated by Sydney Airport contributed **\$7.6 billion in direct value added** and supported **83,300 direct FTE jobs** in Australia. Combined with the indirect contribution to upstream suppliers, it is estimated that tourism facilitated by Sydney Airport contributed **\$14.8 billion to national value added** and supported **145,100 FTE jobs**.

### 2.2.2 Facilitated freight

Sydney Airport is the largest airfreight port in Australia exporting professional, scientific and controlling instruments, telecommunications equipment and edible products – along with a wide variety of other goods.

The international export of goods by airfreight generates revenue, value added and employment across Australia. In 2019, Sydney Airport facilitated around 213,600 tonnes of freight exports, generating almost \$21.7 billion in revenue. This contributed **\$8.4 billion in direct value added** to the economy and supported **88,900 direct FTE jobs**. The purchase of inputs required to manufacture these exports resulted in a further **\$7.5 billion in indirect value added** and **5,800 indirect FTE jobs**.

Sydney Airport also contributed to the Australian economy by facilitating domestic airfreight. In 2019, Sydney Airport facilitated 101,700 tonnes of cargo (inbound and outbound). However, there is a paucity in data available to estimate the commodity profile and the value of domestic airfreight. This is a limitation noted by BITRE, with work currently being undertaken to improve domestic airfreight data in the future. As a result, due to data limitations, this report does not estimate the economic contribution of domestic freight facilitated by Sydney Airport, a limitation consistent with previous iterations of this report.

### 2.2.3 Economic contribution of facilitated tourism and freight

In 2019, Sydney Airport contributed **\$30.7 billion in total value added** and supported **279,800 FTE jobs** from facilitated trade activity. Table 2.1 provides an overview of the Airport's economic contribution from facilitated trade.

Table 2.1 Economic contribution of facilitated tourism and freight, 2019

Component	Direct value added (\$ billion)	Direct FTEs	Indirect value added (\$ billion)	Indirect FTEs	Total value added (\$ billion)	Total FTEs
Domestic tourism	\$1.2	16,400	\$1.2	9,900	\$2.3	26,300
International tourism	\$6.4	66,900	\$6.1	51,900	\$12.4	118,800
International freight	\$8.4	88,900	\$7.5	45,800	\$16.0	134,700
<b>Total</b>	<b>\$16.0</b>	<b>172,200</b>	<b>\$14.8</b>	<b>107,600</b>	<b>\$30.7</b>	<b>279,800</b>

Source: Deloitte Access Economics.

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### 2.2.4 Economic contribution of capital city versus regional domestic services

Deloitte Access Economics modelled the economic contribution of Sydney Airport facilitated domestic aviation by capital city and regional services. A consistent approach was used for both capital city and regional services, with the total domestic contribution being the sum result. Regional aviation services have been defined here to encompass all services outside of the capital city routes.

Deloitte Access Economics estimates that domestic aviation services through Sydney Airport contributed **26,300 FTE jobs** and **\$2.3 billion** in total value added in 2019. Table 2.2 provides an overview of the contribution from the capital city and regional service segments.

Table 2.2 Domestic facilitated tourism economic contribution summary, 2019

Service	Facilitated passengers (million)	Average spend per night	Facilitated spend (\$ million)	Total contribution	
				Value added (\$ million)	FTE Jobs
Regional	1.5	\$93	\$506	\$287	3,400
Capital city	4.6	\$185	\$2,682	\$2,034	22,900
<b>Total domestic</b>	<b>6.1</b>	<b>\$160</b>	<b>\$3,188</b>	<b>\$2,321</b>	<b>26,300</b>

Source: Deloitte Access Economics, BITRE, TRA.

## 2.3 Summary of economic contribution

In 2019, the economic contribution of Sydney Airport and the economic activity it facilitated can be summarised as follows:

- The Sydney Airport precinct directly contributed an estimated \$6.6 billion in value added to the economy. Combined with the indirect contribution for intermediate inputs, the **total contribution is \$11.3 billion**.
- Associated with the total economic contribution of the Sydney Airport precinct is **employment of 56,600 FTE** – equivalent to 1.6% of total employment in NSW in 2019.
- The international tourism and freight exports facilitated by the Airport contributed an estimated \$14.8 billion of value added to the Australian economy directly, and **\$30.7 billion in total**.

In aggregate, the total economic activity generated or facilitated by Sydney Airport in 2019 contributed **\$42.0 billion in value added** to the Australian economy, with **associated employment of 336,400 FTE jobs**. This is equivalent to 2.1% of GDP and 3.0% of total FTE employment.

Table 2.3 provides a breakdown of the 2019 Sydney Airport economic contribution results in comparison to those reported in the 2017 analysis. Overall, between the 2017 and 2019 analysis years, growth in FTE jobs was stagnant, while value added increased. This reflects ongoing improvements to labour productivity, particularly in the transport and tourism sectors, but is also a reflection of broader economy wide progress.

Table 2.3 Economic contribution of Sydney Airport to the national economy, 2017 and 2019

Metric	2017 contribution (2017 \$)			2019 contribution		
	Direct	Indirect	Total	Direct	Indirect	Total
<b>Generated contribution (resulting from precinct activity)</b>						
Value added (\$b)	\$6.2	\$4.5	\$10.7	\$6.6	\$4.6	\$11.2
Employment (FTE)	30,900	26,500	57,400	31,300	25,400	56,600
<b>Facilitated contribution (resulting from tourism and freight)</b>						
Value added (\$b)	\$14.4	\$12.9	\$27.3	\$16.0	\$14.8	\$30.7
Employment (FTE)	173,100	108,000	281,200	172,200	107,600	279,800
<b>Generated and facilitated contribution</b>						
Value added (\$b)	\$20.6	\$17.4	\$38.0	\$22.6	\$19.4	\$42.0
Employment (FTE)	204,000	134,500	338,500	203,500	133,000	336,400

Source: Deloitte Access Economics.

Note: Components may not sum to totals due to rounding.

## 2.4 Economic contribution per daily service

When the total generated and facilitated economic contribution estimates are combined with air traffic and passenger volumes, it is estimated that, in 2019:

- A typical daily international service to Sydney Airport contributed \$130 million in value added and supported an estimated 1,200 FTE jobs in Australia
- Comparatively, an A380 aircraft daily service from China contributed \$632 million in value added and supported an estimated 6,000 FTE jobs
- While, an A380 aircraft daily service from the United Kingdom contributed \$89 million in value added and supported an estimated 800 FTE jobs in Australia.

The 2019 annual economic contribution, from a sample of daily services and aircraft is included in the table below. The contribution per aircraft is notably large for China, due to higher load factors, higher share of international visitors and above average visitor spending per passenger.

Table 2.4 Annual economic contribution per additional service

Service	GDP (\$ million)	FTE Jobs
<b>International (average)</b>		
A380	\$227	2,100
Typical	\$130	1,200
<b>China</b>		
A380	\$632	6,000
Typical	\$345	3,300
<b>United Kingdom</b>		
A380	\$89	800
Typical	\$70	600

Source: Deloitte Access Economics.

Note: BITRE (2020) data is used to estimate the number of seats per flight and seat utilisation from each source market. The spend per trip estimates are derived by Deloitte Access Economics using TRA (2020) data while the share of inbound visitors by each source market is estimated from ABS (2020) data.

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# Appendix A : 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.

## A.1. Value added

Value added is the most appropriate measure of an industry's economic contribution to GDP at the national level, or GSP at the state level.

Other measures, such as total revenue or total exports, may be easier to estimate than value added but they 'double count'. That is, they overstate the contribution of an entity or industry to economic activity because they include, for example, the value added by external firms supplying inputs or the value added by other industries.

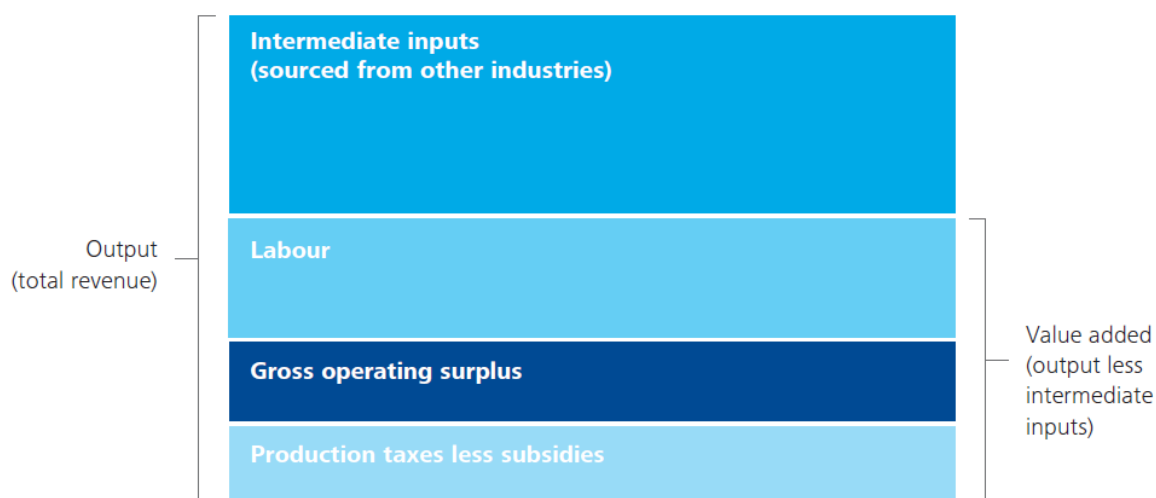
## A.2. Measuring the economic contribution

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 gross domestic product. 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:
  - gross operating surplus (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. It represents the value of output generated by the entity's direct labour inputs, as measured by the income to labour
  - tax on production less subsidy provided for production. This generally includes company taxes and taxes on employment. Note: given the returns to capital before tax (EBITDA) are calculated, company tax is not included or this would double count that tax.
- **gross output** measures the total value of the goods and services supplied by the entity. This is a broader measure than value added because it also includes the value of intermediate inputs used by the entity that flow from value added generated by other entities.
- **employment** is a fundamentally different measure of activity. It measures the number of workers that are employed by the entity, rather than the value of the workers' production.

Figure A.1 shows the accounting framework used to evaluate economic activity, including all components that make up the gross output of an entity.

Figure A.1: Economic activity accounting framework



Source: Deloitte Access Economics.

### A.3. Direct and indirect contributions

The **direct economic contribution** is a representation of the flow from labour and capital within the sector of the economy in question.

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 sector in question. Estimation of the indirect economic contribution is undertaken in an input-output (IO) framework using ABS input-output tables, which report the inputs and outputs of specific sectors of the economy (ABS 2020).

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

### A.4. Input-output analysis

Input Output modelling is a statistical approach to measuring the indirect economic contribution (indirect value added and indirect employment) of an industry. IO tables trace the industries a particular entity or industry purchases inputs from and the industries to which it sells its outputs. These linkages are used to estimate the multiplier effect of expenditure.

A widely used measure of the spillover 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 one 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 IO tables. The industry classification used for input-output tables is based on Australian and New Zealand Industry Classification (ANZSIC), with 111 sectors in the modelling framework.

### A.5. Limitations of economic contribution studies

While describing the geographic origin of production inputs may be a guide to a firm'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 significant unused capacity in the economy (such as unemployed labour) there is only a weak 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.

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Indeed, 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.

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 disappeared?' — should be drawn from them.

The analysis — as discussed in the report — relies on a national input-output 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 model.

# Appendix B : Facilitated tourism contribution approach

This section details the data and methodology used to attribute a proportion of total tourism in Australia facilitated by Sydney Airport. The following data sources were used:

- Tourism Research Australia's (TRA) International visitor Survey (IVS) and National visitor Survey (NVS) for total visitors, visitor nights and regional expenditure in New South Wales and rest of Australia, with the data decomposed by source market, use of transportation and purpose of visit
- The Bureau of Infrastructure Transport, and Regional Economics (BITRE) data on passenger movements in NSW and Sydney Airport
- TRA's State Tourism Satellite Account (TSA) 2018-19 to estimate the tourism contribution multipliers.

## B.1. International visitor expenditure

TRA data is used to estimate total visitors and visitor nights in Australia. Using TRA data on visitor stopover transportation and city of arrival and departure, it is possible to estimate domestic and international visitors and visitor nights that are facilitated by Sydney Airport.

In particular, of the 692 million nights spent in Australia in 2019, 143 million or around 21% are facilitated by Sydney Airport in some form. This does not include international visitors who visit NSW via cruise or domestic visitors who stopover in NSW via car or other road transport (e.g. bus and public transport).

With the estimates of visitor nights attributable to Sydney Airport disaggregated by source markets and purpose of visit, it is possible to apply TRA estimates for expenditure per night in Australia for each visitor segment. This creates an average expenditure profile for each type of international visitor through Sydney Airport.

However, not all expenditure by visitors in Australia that pass through Sydney Airport can be attributed to the Airport. International visitors are divided into three different types with different shares of expenditure attributable to Sydney Airport:

Type	Description of expenditure attribution
Type 1	International visitors who fly in and out of Sydney Airport. All of their expenditure is attributed to Sydney Airport if they do not fly to another location in Australia. If they fly somewhere else, their expenditure in rest of Australia would be captured under type 2A or type 3 visitors for another airport.
Type 2A	International visitors that fly out from Sydney Airport to an international destination and that fly in from overseas to another Australian city. 100% of their expenditure in NSW and 50% of their expenditure in the rest of Australia if they do not fly to the rest of Australia is attributable to Sydney airport. This will not lead to double counting with other airports, as only the NSW non-flight nights of other airports are considered as being attributable to other airports.
Type 2B	International visitors that fly into Sydney Airport and that fly out of Australia from another airport. 50% of their expenditure in NSW and 50% of their expenditure in the rest of Australia (if they do not fly to rest of Australia) is attributable to Sydney airport. This avoids double counting of expenditure that would be attributable to another airport.
Type 3	International visitors that fly to Sydney on a domestic flight and who fly into and out of Australia from a non-Sydney Airport. 100% of their expenditure in NSW is attributed to Sydney Airport. However, none of their expenditure in rest of Australia is captured as this is attributable to other Australian airports.



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This approach is deemed best practice as it is a more rigorous approach to avoiding potential double counting of nights facilitated in other states that could be attributable to other airports.

After accounting for expenditure that is partially facilitated through other airports, expenditure on airfares and on retail and food in Sydney Airport precinct is excluded. This is to avoid double counting, as these items are captured (in full or in part) by the Sydney Airport precinct contribution. After accounting for these, Sydney Airport is estimated to facilitate \$12.8 billion in international visitor expenditure in 2019.

### B.2. Domestic visitor expenditure

A similar process is used to estimate interstate visitor expenditure that is attributed to Sydney Airport. TRA data is used to estimate interstate visitors that use Sydney Airports during their trip.

Estimates for visitors from interstate capital city and regional visitors is applied to arrive at the tourism expenditure for interstate visitors who fly into NSW. BITRE data is used to determine the proportion of interstate domestic passengers that fly into NSW and use Sydney Airport. The expenditure on airfares and within Sydney Airport precinct is also excluded to avoid double counting. In 2019, Sydney Airport facilitated \$3.2 billion in domestic visitor expenditure in NSW.

### Calculating the facilitated contribution of tourism using the Tourism Satellite Account approach

This analysis uses the TSA approach to measure the economic contribution of facilitated tourism. The TSA framework is conceptually similar to and draws on the ABS Input-Output (IO) tables to generate results. It is based on an international approach to defining the tourism sector and different tourism products and related industries depending on the extent to which they interact with tourists either directly or indirectly.

While conventional IO modelling can be applied to any sector of the economy (including tourism by using an appropriate sector-specific definition of the tourism sector), the TSA approach is Deloitte Access Economics' preferred approach to measuring the economic contribution of the tourism sector as it ensures that the analysis is consistent with international guidelines for measuring and reporting on the economic activity of the tourism sector.

The definition of direct and indirect are slightly different in the TSA approach as direct is defined as activity involving a direct interaction with tourists. Accordingly, the ratio of direct and indirect activity differs from results using a standard IO approach. However, estimates of total value added and employment should be similar across the two approaches.

### The use of unit estimates of economic contribution

Deloitte Access Economics has reported on Sydney Airport 'per passenger' and 'per flight' economic contribution. There are a number of parameters that need to be considered in constructing these estimates. This includes the makeup of a typical airline flight, including the number of seats, passenger load factors, the mix of Australian to international passengers and the share of passengers which are short-term visitors, and the expenditure patterns of tourists who are defined as short-term visitor arrivals and facilitated through Sydney Airport.

Importantly, these estimates reflect the contribution of current visitors to the economy from a particular source market. **They do not reflect the net impact on the economy of an increase in tourist arrivals or a change in visitor mix.** An analysis of this net impact would need to consider the potential reallocation of resources from other industries and the extent to which tourism infrastructure, e.g., airports and hotels respond to additional tourists. This would need to be examined through an economic impact study drawing on economy-wide modelling techniques, such as Computable General Equilibrium (CGE) modelling.

# Limitation of our work

## General use restriction

This report is prepared solely for the internal use of Sydney Airport. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose set out in the engagement letter dated 12 November 2020. You should not refer to or use our name or the advice for any other purpose.



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