
Competition between Australian airports: focus on Brisbane Airport

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Executive summary

Brisbane Airport Corporation (BAC) has commissioned Oxera to undertake an assessment of the degree of competition faced by Brisbane Airport, as well as the competitive environment between airports in South East Queensland and Australia more generally.

Since 2010, the aviation market in Australia and at Brisbane Airport has grown, with an increase in the proportion of international traffic and low-cost carriers. There are currently five airports in Australia with more than 10 million passengers per annum (mppa), two of which (Sydney and Melbourne) are larger than Brisbane Airport. In addition to these large airports, there are many small and medium-sized airports that act as secondary and regional gateways. A number of these airports are located near Brisbane Airport and have increased their traffic over the last several years.

Brisbane Airport has begun work on a new runway, which it is planning to open in 2020. This new runway will allow the airport to double its current capacity. A number of nearby airports have also recently expanded or are currently expanding their capacity. This indicates that these airports are likely to compete fiercely for passenger and airline traffic going forward in an effort to fill up their capacity.

In this report, we consider the key ways in which Brisbane Airport competes with other airports—through competition for passengers and competition for airlines.

The largest airlines at Brisbane Airport—Qantas, Virgin, Jetstar and Tiger, which make up 79% of the capacity—have a number of outside options in terms of other airports at which they could locate existing or new capacity. These airlines may consider locating capacity at airports near to Brisbane Airport in order to tap into the same passenger demand. Indeed, this has been the case with a number of low-cost carriers, who have set up operations at Gold Coast Airport rather than at Brisbane. For airports that are further from Brisbane—such as Sydney and Melbourne—airlines may still consider them in competition for either existing or new airline services.

Our analysis indicates that one airline moving just four aircraft would be sufficient to make a 10% charge increase unprofitable for the airport. We find evidence of routes consistently being ‘churned’ in the overall Australian market, and that Brisbane Airport has the highest churn rate of Australian airports with more than 5mppa. This demonstrates that airlines can and do relocate capacity. Therefore, airlines’ threats to relocate capacity to other airports in response to an increase in price or reduction in service quality must be treated by the airport as credible.

If airlines were to reduce their operations at the airport rather than remove them altogether, this would have a significant impact on Brisbane Airport, and the switching costs to the airlines would be lower. As a result, Brisbane Airport expends a significant degree of effort in demonstrating the commercial case for airlines to operate routes from the airport, and finds that they are often required to provide incentives or support to airlines.

Brisbane Airport faces competition for passengers from nearby airports, including Gold Coast Airport, Sunshine Coast Airport and Toowoomba Wellcamp Airport. There is evidence that passengers from Brisbane’s catchment area use these airports and vice versa. Indeed, there was at least

one alternative service available within 200km for 69% of departures from Brisbane in 2017. For Sydney and Melbourne airports, the corresponding figures were 44% and 52%. For Adelaide and Perth, there were no competing services within 200km for any departures from those airports.

There may be some passengers—for example, those living in the immediate vicinity of the airport—who are travelling to destinations not offered by other airports in the catchment area, for which the airport faces limited competitive constraints. However, Brisbane Airport also competes in a wider geographic market to attract certain types of passengers—such as leisure passengers, who are willing to switch between destinations. Leisure passengers account for over 50% of the traffic at the airport. Transfer passengers, who make up 8% of the airport's traffic, also look beyond airports in the local catchment when deciding where to fly to and from. These types of passengers are likely to act as a constraint on Brisbane Airport in terms of its ability to raise charges and/or reduce service quality.

The extent of competitive constraints faced by an airport is an important consideration in determining whether to apply economic regulation and, if so, in what form. Economic regulation should be applied where there is a concern about the potential for firms to abuse their dominant market positions due to a lack of effective competition. However, where regulation is not needed, or where there is more regulation than required, it can be costly and lead to poor outcomes for customers. Our analysis of the degree of competition, and hence the extent of competitive constraints faced by the airport, indicates that a light-handed regulatory regime, such as the current regulatory regime in place, is appropriate.

1 Introduction

Prior to 2002, Brisbane Airport was subject to price regulation administered by the Australian Competition and Consumer Commission (ACCC) under the Prices Surveillance Act 1983.¹

In 2002, the Australian government commissioned a report from the Productivity Commission, which recommended that Brisbane Airport and the other regulated Australian airports should be granted commercial freedom to negotiate with airlines, subject to ongoing price and service quality monitoring.² This was, in part, because the existing regulatory regime was deemed to be too 'heavy-handed' given the nature of the market, and as a result it 'discouraged efficient investment by sending poor price signals both to airport operators and users about the costs of providing aeronautical services'.³ The Productivity Commission also noted that 'the full benefits of privatisation of airports are unlikely to be realised if commercial relationships between airports and airlines continue to be heavily conditioned by intrusive price regulation'.⁴

The Commission determined that the regulated airports, including Brisbane Airport, faced market constraints that would ensure that prices would not rise excessively, since:

- major airlines would be able to use their countervailing buyer power to ensure that airports could not abuse their monopoly positions;
- commercial incentives would encourage airport operators to keep prices at the level that maximises passenger traffic (e.g. in order to maximise revenues from their retail activities, car parking, etc.);
- the pursuit of new airline business, in a bid to expand the market, would prevent airports from increasing their charges.

The government followed the recommendations of the report and discontinued price caps and price notification at all airports in 2002. Instead, a price monitoring regime was introduced at Brisbane Airport and six other airports for an initial period of five years.⁵

The ACCC has since been required to monitor prices (as well as financial performance and quality of service) and issue annual reports, including a comparison of airports' performance across certain indicators on the basis of information submitted by the airports. The ACCC's monitoring now only covers Brisbane, Melbourne, Perth and Sydney Airports.⁶ In 2011, the Productivity Commission recommended that these arrangements should continue to apply to these airports until June 2020 and should be subject to a review in June 2018.⁷

¹ This comprised a CPI-X price cap on declared aeronautical services, price monitoring of declared aeronautical services, price monitoring of aeronautical-related services and cost pass-through provisions for new investments approved by the regulator. This was complemented by service quality monitoring and a provision for the ACCC to determine access charges by an arbitration process (under the Part IIIA national access regime).

² Productivity Commission (2002), 'Price Regulation of Airport Services', inquiry report no. 19, 23 January.

³ Ibid. p. XXXII.

⁴ Ibid. p. 357.

⁵ The other airports were Adelaide, Canberra, Darwin, Melbourne, Perth and Sydney.

⁶ The second-tier airports—Adelaide, Darwin and Gold Coast—are subject to a self-administered monitoring regime, under which the airports are expected to disclose (on their websites) information on aeronautical charges, car parking services, service quality, and complaint-handling. This was introduced in 2009.

⁷ Economic Regulation of Airport Services (2011), 'Productivity Commission Inquiry Report', No. 57, 14 December, p LI.

To that end, the Australian government has recently published the terms of reference for the review, the purpose of which is to consider the effectiveness and efficiency of the current arrangements to determine whether they remain appropriate.⁸

A key factor considered in the Productivity Commission's past reviews and ultimate decisions about the appropriate form of regulation is the extent to which the airports face competitive constraints. Indeed, in its initial assessment, the Productivity Commission determined that there were sufficient competitive constraints—including the buyer power of airlines, commercial incentives and pursuit of new airline business—so that airports were not able to exercise their market power.

There is a role for regulators to ensure that the interests of passengers are protected. However, where regulation is not needed, or where the degree of regulation is not proportionate to the degree of market power, it can be costly (in terms of direct and indirect costs) and can lead to poor outcomes for customers. Indeed, as the Productivity Commission notes, 'an effective regulatory framework facilitates efficient investment and operational decisions that are taken by airports (and airlines) to meet the growth in passenger numbers, and passengers' evolving needs, now and into the future'.⁹ The Productivity Commission is therefore considering whether the existing regulatory arrangements are fit for purpose.

This report considers the extent of competition faced by Brisbane Airport as a submission to the Productivity Commission's inquiry. We consider competition between airports in Australia as a whole, but we also focus in more detail on the extent of competition between airports in (South East) Queensland and the degree of competition faced by Brisbane Airport itself. We look at historical data since 2010, and we also briefly consider whether the trends we identify are likely to continue going forward.

It is important to note that there is no single definitive piece of evidence that determines the extent of competition faced by Brisbane Airport. Rather, various sources of evidence and assessments of different competitive constraints need to be considered together to reach an overall conclusion.

This report is structured as follows:

- section 2 sets out the conceptual framework for considering competition between airports;
- section 3 provides an overview of the developments in the Australian, Queensland and Brisbane aviation markets, focusing on the period since 2010;
- sections 4 and 5 consider the key channels of competition faced by Brisbane Airport—competition for airlines and competition for passengers;
- section 6 concludes and considers the implications for regulation of Brisbane Airport.

⁸ Australian Government (2018), 'Economic Regulation of Airports - terms of reference', 22 June.

⁹ Productivity Commission (2018), 'Economic Regulation of Airports', Issues Paper, July, p.8.

2 Conceptual framework

This section sets out a conceptual framework for analysing competition between airports. This is important in order to understand the key ways in which airports compete with one another, and the factors that are relevant to consider in determining the extent of competition faced by an airport. While this framework can be applied across airports, different factors will be relevant to assessing the competitive constraints at different airports depending on their circumstances and business models. In this section we therefore focus on the aspects of competition that are most likely to be relevant to Brisbane Airport (BNE). These key factors are summarised in Box 2.1.

Box 2.1 Key messages

- Brisbane Airport competes with other airports in two main ways:
 - for airlines when they are deciding where to allocate new aircraft, or when they are determining whether they should shift capacity between airports. The ease with which airlines can reallocate capacity between airports (i.e. route churn) and the degree of competition between airports for these airline services (e.g. as indicated by the marketing support/incentives offered), are further explored in section 4.
 - for passengers in the local catchment area, or further afield in the case of transfer passengers and some passenger types (e.g. leisure passengers). This is set out in more detail in section 5.
- Even relatively small changes in where passengers fly, or where airlines base new or existing aircraft, can have a material impact on the profitability of airports. Hypothetically, if Brisbane Airport raised prices by 10% and lost approximately 1.2m passengers or four domestic aircraft, the price rise would be unprofitable for the airport.

2.1 Introduction

At a high level, airports enable airlines to transport passengers to their preferred destinations. In doing so, airports earn revenue in two main ways:

- from airlines/passengers through aeronautical charges (such as landing/take-off charges);
- from passengers through non-aeronautical activities (such as car parking or the purchase of food and drink at the airport).¹⁰

While airport revenue therefore varies depending on passenger and airline traffic at the airport, airport costs are largely fixed in the short term due to the capital-intensive nature of the business.¹¹ As a result, even relatively small changes in where passengers fly or where airlines base new or existing aircraft can have a material impact on the profitability of airports. Attracting airlines and passengers are therefore key objectives of airports and the main drivers of competition between airports, as discussed below.

In this report we focus on demand-side substitution—i.e. the extent of substitution between airports by airlines and passengers. Supply-side

¹⁰ The importance of dual revenue streams to airports has long been recognised in the economics of aviation. See, for example, Starkie, D. (2002), 'Airport regulation and competition', *Journal of Air Transport Management*, 8, pp. 63–72.

¹¹ There are also some components of operating costs (such as security) that are unlikely to vary proportionally with passenger volumes.

substitution can also be a source of competitive constraints for airports. Supply-side substitution refers to alternative suppliers using their existing facilities to start producing the product in question, or servicing the relevant geographic area. In the case of airports, an example is where an airport offering general aviation or military services starts providing services to commercial passengers. For supply-side substitution to act as a relevant competitive constraint, it would need to occur quickly (e.g. less than one year), effectively (e.g. on a scale large enough to affect prices), and without the need for substantial sunk investments (e.g. investment incurred on market entry that is not recoverable when exiting).¹² Supply-side substitution therefore acts as less of a competitive constraint than demand-side substitution in the airports market.

Entry is also likely to be difficult, given the significant investment and cost that is required. In the context of the airports sector, it can therefore be more relevant to consider whether existing airports can add capacity (e.g. terminals, piers) rather than to consider entry of an entirely new airport. However, we note that in 2014 there was a new greenfield airport development in Queensland with the opening of Toowoomba Wellcamp Airport. This airport now serves over 3,000 air traffic movements (ATMs) and over 200,000 seats per annum. There is also a new airport planned in Sydney—Western Sydney Airport—which is due to open in 2026 alongside the development of an aerotropolis with major investments in technology, education and advanced manufacturing.¹³

Airports may also face competition from alternative modes of transport, such as rail or buses. Alternative modes of transport are, however, likely to only compete with air travel on specific (short-haul) routes.¹⁴ Overall, we consider that intermodal competition is unlikely to be a significant constraint for Brisbane Airport.¹⁵

Below we set out the two key types of competitive constraints that we consider BNE is likely to face: competition for airline services and competition for passengers.

2.2 Competition for airline services

Airlines earn revenue by offering passengers a way to reach their destination. They compete with other airlines (and in some cases other modes of transport) for passengers, maximising yield through revenue management, and driving down costs. Airlines decide where/when to operate services, how often those services operate, what capacity those services have and which fares/product offerings are available on those services.

Airports compete for airlines' existing capacity and for new services. Competition for existing capacity arises when airports compete for aircraft that are already deployed in the market. Competition for new services arises when an airline has additional capacity that it wishes to deploy in the market. The sections below consider these forms of competition in turn. Both can have a

¹² Office of Fair Trading (2004), 'Market Definition', para 3.15.

¹³ See: <http://westernsydneyairport.gov.au/>, accessed 13 August. Productivity Commission (2018), 'Economic Regulation of Airports', Issues Paper, July. We note that Melbourne Airport and Perth Airport are due to open new runways in 2024 and 2028 respectively.

¹⁴ We note that there are no flights between Brisbane and Gold Coast or Sunshine Coast as the airports are within driving distance.

¹⁵ In a 2016 survey commissioned by Brisbane Airport, when passengers using BNE were asked how they got to the international airport they departed from, 25% reported that they went by car/taxi/rental car, 2% went by train and 1% went by bus rather than flying.

material impact on the commercial success of airports.¹⁶ Indeed, the ability of existing airlines to negotiate with airports and the pursuit of new airline business are two factors recognised by the Productivity Commission as exerting competitive pressure on airports.¹⁷

Importantly, however, it is not necessary for an airport to compete for all of its airline services in order to face competitive constraints. Instead, it is necessary to analyse whether the airport faces competition at the margin—i.e. whether airlines are able to switch or allocate marginal capacity to other airports, and whether any such competition at the margin is sufficient to constrain the airport's behaviour with respect to its wider customer base.

2.2.1 Competition for existing capacity

As the aircraft that airlines operate are mobile assets, airlines can allocate these aircraft where they will be most profitable. Many airlines allocate their capacity relatively freely across airports by moving some routes, rotations (i.e. frequencies) or entire bases/operations. For instance, in response to a price rise by an airport, one alternative would be for an airline to switch flights (in part or in full) to nearby airports, such that it could still tap into the same passenger demand located near that airport at a lower cost. Another possible response to the price increase could be for an airline to reduce the number of services it operates from an airport, and switch to airports in an entirely different region or country to capture new passenger demand. This ability of airlines to allocate capacity to a number of different airports forces airports to compete for those aircraft.

However, there are some costs incurred by airlines in reallocating those assets that would be taken into account in their decision-making. Switching costs fall into two main categories:

- financial costs, such as those incurred in the relocation of assets to a new airport, e.g. relocation of staff and marketing of new routes;¹⁸
- the opportunity costs of closing a route and opening a new one, as there may be a period of bringing a route to maturity when yields are lower.

Switching costs will affect the profitability of alternative options and the likelihood that airlines will switch. These costs are likely to be lower if only some routes or frequencies are relocated compared to if entire bases are moved. In addition, the more substitutable airports are, the easier it is for airlines to switch between them.

The extent of switching costs will also depend on the airline's business model and the role played by the airport for that airline. For example, consider an airline that is dependent on a single airport for a large proportion of its traffic because it has its base at this airport and operates the majority of its routes from there. The costs for this airline to relocate some capacity following a price increase could be high in terms of the costs of moving staff (for example) and the effects on the viability of some routes as part of its network. On the other hand, an airline that operates point-to-point services and does not rely on a network to ensure that its flights are viable is more likely to consider a wide

¹⁶ For example, see: NSW Parliamentary Research Service (2014), 'Sydney Airport: performance and potential competition from a second airport', Briefing Paper No. 2/2014.

¹⁷ Productivity Commission (2002), 'Price Regulation of Airport Services', inquiry report no. 19, 23 January.

¹⁸ IATA (2013), 'Airport competition: IATA Economics Briefing No. 11', November, p. 17.

range of airports when deciding where to allocate capacity. This airline can more easily relocate capacity at lower (and possibly minimal) costs.

There may also be differences in the ability to switch between domestic and international airlines. A domestic airline's outside options in terms of airports from which it could fly would be limited to those within Australia. However, an international airline, such as Emirates, could choose to fly from Dubai to London instead of Dubai to Brisbane.

Airlines do not necessarily need to be able to switch (some or all) capacity to a different airport to have an effect on an airport's behaviour— simply the threat of switching can have an effect. However, the greater the ability to switch, the more credible the threat of switching is likely to be. Therefore, overall the easier it is for an airline to switch capacity to an alternative airport, the greater the degree of countervailing buyer power it is likely to have.

Airports often provide incentives to airlines to mitigate some of these switching costs, for example by providing marketing support or reductions in charges while the route is developing.¹⁹ This in itself is a reflection of airport competition and is explored in more detail in section 4.

In addition, airlines are increasingly adopting new business models that involve very little investment in ground facilities and staff, choosing instead to use local handling agents. Electronic ticketing and check-in have also reduced ground operation costs. As a result, switching costs for airlines may be lower than they have been in the past, making it easier for airlines to shift between airports.

2.2.2 Allocating new growth

Airports may also compete to attract airlines to operate new routes and/or base new aircraft at their airport. These airlines could originate from within Australia or (in the case of routes that start or end outside Australia) beyond. The allocation of new aircraft can therefore act as a competitive constraint on the behaviour of airports. For example, if Qantas expects the delivery of five new aircraft, it will consider the yields from the potential airports at which it could locate this capacity. When allocating new aircraft, airlines will not incur the switching costs that they would when moving capacity between airports, meaning that they may be more easily able to put airports in competition with one another.

This type of competition is more relevant to consider in the context of a growing aviation market. Therefore, the overview of developments in the Australian, Queensland and Brisbane aviation markets set out in section 3 is important in understanding the extent to which this form of competition is likely to arise.

2.3 Competition for passengers

Passengers decide whether to travel and, if so, whether to fly or travel by another mode of transportation. If they do want to fly then they also need to decide where/when to fly, which airline to fly with and which airport to fly from/to.

Competition between airports has traditionally been considered mainly in terms of the extent to which more than one airport serves a given catchment area of potential passengers. Where two or more airports serve a particular catchment

¹⁹ In some cases the government may also provide support to develop particular routes at airports as it has recently done in the context of Air Asia X moving services from Melbourne (Tullamarine) to Avalon Airport.

area, local passengers may be able to switch between these airports. However, airports that are located far away from one another may still compete for passengers. For example, a passenger seeking a city break may consider Brisbane and Adelaide as substitutable destinations, while a passenger seeking a beach holiday may trade-off the Gold Coast and Cairns.

As passengers travel for different reasons, they will have different willingness (and ability) to switch between travelling and not travelling, travelling at different times or from/to different locations. Passengers can be segmented in various ways, such as by journey purpose (business, leisure or visiting friends and relatives), by flight time (short-haul or long-haul), and as origin and destination (O&D) or transfer passengers. Each of these passenger groups is likely to have different characteristics and willingness to travel to alternative origin or destination airports. For instance, business passengers are likely to be more time-sensitive than leisure passengers, and may not be willing to travel very far to an airport.

Therefore, the type of passengers served by an airport needs to be identified to assess the degree of substitutability between airports, as, for example, an airport that primarily serves short-haul business passengers is likely to have a narrower catchment area than an airport that serves long-haul leisure and transfer passengers. However, it is not necessary for all passengers to have a choice between airports. If there are a sufficient number of passengers who can switch airports, this should constrain the airport's behaviour.

Airports may also compete for passengers transferring between flights. In the context of the Australian market, this primarily consists of traffic transferring between domestic flights or between domestic and international flights. While this comprises a small proportion of traffic for most airports, it is a significant part of the passenger base for some airports. If an airport is competing for transfer traffic, it is likely to compete with airports beyond its local catchment area. Therefore, regardless of whether there is another airport located nearby, the airport may face competitive constraints (this is explored in more detail in section 5).

2.4 The effect of competition on airports

The previous section outlined that the ability of airlines to locate growth elsewhere and for airlines/passengers to (credibly threaten to) switch are key elements of competition between airports. However, the question remains as to what extent these decisions constrain an airport's behaviour.

When making commercial decisions, an airport will assess the likely impact on its profit of changing the prices it charges (or the services it offers) to airlines. In particular, an airport will need to assess what the impact is likely to be on its volumes (i.e. the passengers and aircraft using its airport) and how this will affect aeronautical and non-aeronautical revenue and costs (and hence profit).

To illustrate the extent to which changes in prices could affect profitability, given the economic characteristics of airports discussed above, below we seek to replicate the commercial analysis that an airport could undertake to inform its pricing decision.

To do this, we consider the case of a small but significant non-transitory increase in prices (SSNIP), a standard applied by competition authorities.²⁰ We

²⁰ For example, see ACCC (2017), 'Merger Guidelines'.

examine the effect of two potential changes in airport charge—a 5% increase and a 10% increase.

A consideration of the magnitude of the airline and passenger loss that the airport could sustain while remaining profitable can be informative of the extent of competitive constraints faced. When prices are increased, some airlines may move away, but the airport receives more revenue from the airlines that remain and pay higher charges. Therefore, the airport would need to assess the overall profit loss or gain in deciding whether to implement a price rise. If the airport is able to profitably implement a price rise, this may indicate that the competitive constraints facing the airport are weak. This may be because there are no alternative options or no sufficiently comparable alternatives for airlines and/or passengers. If the price increase is unprofitable, it is likely that the airport faces competitive constraints. As noted by the Productivity Commission, the availability of alternatives and potential loss of business can constrain airports from exploiting their market power—e.g. by raising prices.²¹

As noted above, the effect on an airport's profitability of a small number of passengers or airlines switching a limited number of services could be significant due to fixed costs of operation and loss of non-aeronautical as well as aeronautical revenue. The relevant factor is therefore whether there are enough 'marginal customers' who would switch to prevent the airport from profitably sustaining prices at 5–10% above competitive levels.

Below, we assess the critical sales loss—the percentage reduction in passenger numbers at which the airport makes the same profit before and after imposing a SSNIP. The 'actual loss' is the predicted percentage decrease in sales in response to such a SSNIP by the airport. If the actual loss following the SSNIP exceeds the critical loss threshold, then the SSNIP is unprofitable, implying that the airport may not have an incentive to raise price. If the actual loss is less than the critical loss threshold, then an airport could profitably increase prices by a small but significant amount, as passengers/airlines may not be willing or able to switch away or reduce volume.

We estimate the fall in the annual volume of passengers based on Brisbane Airport's 23 million passengers per annum (mppa) in 2017.²² We then translate this into an equivalent number of aircraft serving the airport.²³

To estimate the effect of an increase in airport charges on the annual volume of passengers, we consider a hypothetical increase in aeronautical revenue per passenger by 5% and 10%—i.e. from \$11.40 to \$11.97 and from \$11.40 to \$12.54 respectively.²⁴ To reflect the possibility that the airport's costs may also decline when there are fewer passengers, we consider two scenarios:²⁵

- fixed costs scenario—costs remain fixed and independent of the change in passenger numbers;

²¹ Productivity Commission (2018), 'Economic Regulation of Airports', Issues Paper, July.

²² See: <https://bne.com.au/corporate/about/quick-facts>, accessed 31 July.

²³ We do this based on assumptions about: aircraft capacity, average occupancy rate, aircraft movements per day and number of days in a year that the airport is served by that aircraft. This gives an estimate of the total number of passengers that come from that aircraft a year (and hence the number that would be lost if that aircraft no longer served that airport).

²⁴ Aeronautical revenue may differ by passenger type; for example, the aeronautical revenue per international passenger is likely to be higher than aeronautical revenue per domestic passenger. However, due to the difficulty in estimating the precise aeronautical revenue by type of passenger, we use the average aeronautical revenue per passenger in our calculations.

²⁵ Although operating costs may differ according to passenger type (e.g. costs for international passengers may be higher than those for domestic passengers), this analysis is based on the average operating cost per passenger, due to the difficulty in estimating a precise operating cost per passenger.

- cost savings scenario—costs decline based on the percentage decrease in passenger numbers. For this, we use a cost elasticity with respect to number of passengers of 0.1.²⁶

We assume that the airport also loses non-aeronautical revenue for each passenger who no longer uses the airport, thereby taking account of the multi-sided nature of the airport market.²⁷ The results for the different scenarios are presented in Table 2.1.

Table 2.1 Critical loss analysis

	Status quo (2017)	5% price rise	10% price rise
Aeronautical revenue/passenger (\$)	11.40	11.97	12.54
Non-aeronautical revenue/passenger ¹ (\$)	18.22	18.22	18.22
Total revenue/passenger (\$)	29.62	30.19	30.76
Critical loss (number of passengers lost that would make price rise unprofitable)			
with fixed costs		615,172	1,198,225
with cost savings		634,459	1,234,781

Note: ¹ The figures in the table above show total non-aeronautical revenue per passenger at Brisbane Airport. However, we note that only a portion of non-aeronautical revenue is likely to vary with passenger numbers (at least in the short-term). We have estimated that the non-aeronautical revenue that varies with the number of passengers is \$9.29 per passenger.

Source: Oxera analysis of BAC's Annual Report (2017).

This indicates that if Brisbane Airport raised prices by 5% or 10% and lost approximately 600,000 or 1.2m passengers respectively, the price rise would be unprofitable for the airport.

To put these numbers into context, below we translate the estimated critical loss threshold for Brisbane Airport into an equivalent loss in number of 'standard' aircraft serving the airport. Given domestic and international traffic may face different competitive dynamics (as discussed further in section 4), we consider this for two scenarios.

If Brisbane Airport were to lose a Boeing 787—a standard international aircraft—assuming a 74% load factor and two ATMs per day (i.e. one turnaround),²⁸ it would lose over 145,000 international passengers per annum. Similarly, if Brisbane Airport were to lose an Airbus A320—a standard domestic aircraft—assuming a 78% load factor and six ATMs per day (i.e. three turnarounds), Brisbane Airport would lose over 300,000 domestic passengers per annum, as set out in Table 2.2.

²⁶ This is based on an assessment undertaken by the Commission for Aviation Regulation in Ireland for Dublin Airport. Commission for Aviation Regulation (2014), 'Maximum Level of Airport Charges at Dublin Airport: 2014 Determination', Commission Paper 2/2014, 7 October.

²⁷ Only a portion of non-aeronautical revenue is likely to be lost (at least in the short-term) with a reduction in passengers. We consider that the categories of non-aeronautical revenue that will be lost in the short-term with a loss of passengers are 'landside transport', 'retail', and 'operating property'. We have assumed that 'investment property', 'interest' and 'other' revenue remain unchanged when the airport loses passengers. This is likely to be a conservative approach.

²⁸ The load factors are estimated as the ratio of total passengers over total capacity for international and domestic flights departing from and arriving at Brisbane Airport in 2017. We note that there are a few international flights with very low load factors that drive down the average for the international load factor. The number of turnarounds reflects common business practice based on duration of the flight.

Table 2.2 Passenger traffic from one ‘standard’ aircraft

‘Standard’ aircraft		Boeing B787	Airbus A320
Aircraft capacity	[A]	271	180
Average occupancy rate	[B]	74%	78%
Assumed movements per day	[C]	2	6
Days in a year	[D]		365
Notional aircraft annual traffic	[AxBxCxD]	145,689	306,364

Source: Oxera, based on IATA data and public domain information.

This implies that losing, on average, approximately four A320s (typical domestic aircraft) or eight B787s (typical international aircraft) would be sufficient to render a 10% price rise unprofitable.²⁹

Therefore, if in response to a price increase an airline or multiple airlines shift at least some capacity away from the airport, the price rise is unlikely to be profitable. This is in part because as passengers shift away from the airport, this would have a negative impact on the airport’s aeronautical and non-aeronautical revenues. Indeed, in its 2002 review, the Productivity Commission determined that commercial incentives from activities such as retail and car parking would encourage airport operators to keep prices at the level that maximises passenger traffic.³⁰

2.5 Conclusion

While it is useful to distinguish between different types of competition, the channels discussed above are closely linked. There is a complex interaction between passenger and airline demand. To some extent, airline demand for airport services is a ‘derived’ demand from passenger demand because airlines’ decisions (e.g. regarding destinations offered and frequency) will be strongly influenced by passengers’ preferences and behaviour. For instance, if sufficient passengers are willing to (and can easily) switch between two nearby airports, airlines may also see these two airports as substitutes. Airlines are also unlikely to operate services or routes unless there are a sufficient number of passengers willing to travel to particular destinations. Therefore, to some extent, passengers’ propensity to travel to particular destinations or to switch is internalised in an airline’s decision-making process.

However, when deciding whether to operate services and where to operate them to/from, airlines will take additional factors into account and behave differently from passengers. When an airline considers where to locate new capacity or whether to shift some routes to an alternative airport, airlines will consider yields available from different airports (which are partly determined by the strength of the passenger demand—e.g. based on factors such as disposable income), but also by other factors such as airport charges, and how the routes fit with their overall network and strategic plans.

Passenger demand is also derived from airline demand. If an airline starts flights from a particular hub airport and draws passengers in from other airports to connect to this flight, then it will be more difficult for secondary airports to establish point-to-point services due to the airline’s desire to create a hub and spoke system.

²⁹ The estimated critical loss in the scenario with fixed costs is 3.9 domestic or 8.2 international aircraft, while the estimated critical loss in the scenario with cost savings is approximately 4.0 domestic or 8.5 international aircraft.

³⁰ Productivity Commission (2002), ‘Price Regulation of Airport Services’, inquiry report no. 19, 23 January.

As in any market, competition between airports may take place along several dimensions, including price and service quality. Service may be offered both to passengers directly (in the form of lounge facilities, retail offerings, terminal ambience) and to airlines (in the form of operating processes that improve airline efficiency and reduce costs).

The ways and extent to which airlines and passengers regard airports as substitutes is therefore likely to differ, and it is important to consider both in assessing the extent of competitive constraints faced by an airport.

Importantly, even if only some passengers or airlines are able to switch, this may be sufficient to constrain the behaviour of the airport. Any development in the aviation market that increases this ability of airlines or passengers to switch will increase the competitive constraints on airports. This is discussed in section 3.

3 Overview of Brisbane Airport and developments in the Queensland and Australian aviation markets

This section first provides an overview of Brisbane Airport and then outlines key developments in the (South East) Queensland and Australian aviation markets since 2010 that are relevant in assessing the degree of competition faced by Brisbane Airport. The key messages are set out in the Box 3.1.

Box 3.1 Key messages

- The Australian aviation market has grown significantly since 2010. In 2017, there were 83 airports with more than 1,000 ATMs. Brisbane Airport accounted for 13% of Australia's ATMs and 14% of seat capacity. While its proportion of Queensland's ATMs and capacity is higher (e.g. 56% in terms of capacity), Gold Coast, Cairns and Sunshine Coast airports are significant competitors and have increased their traffic since 2010.
- A number of airports located near Brisbane Airport have recently expanded or are planning expansions to increase capacity. This includes Toowoomba Wellcamp Airport—which is located only 120km from Brisbane Airport—Sunshine Coast Airport and Gold Coast Airport. Brisbane Airport has also begun work on a new runway, which it is planning to open in 2020. This new runway will allow the airport to double its current capacity. As all of these airports are expanding in an effort to attract more airline and passenger traffic, the extent to which they compete with one another for this traffic may increase going forward.
- The proportion of international traffic and LCCs in the Australian market has increased over the period, though LCCs only accounted for 25% of capacity in 2017. The proportion and growth of LCCs at Brisbane Airport is lower than the Australian market as a whole as a number of LCCs have chosen to set up bases and operate flights from other airports (e.g. Gold Coast Airport) instead, demonstrating the competition between the airports for airline services.

3.1 Overview of Brisbane Airport

Brisbane Airport is located approximately 15km from the central business district in Brisbane in South East Queensland. Brisbane Airport is operated by Brisbane Airport Corporation Pty Limited (BAC), a private company.

There were 23.2mppa travelling through Brisbane Airport in 2017 and over 190,000 ATMs.³¹ 75% of the passengers were domestic, while 25% were international.³² It is the third largest airport in Australia after Sydney Airport (43.3mppa) and Melbourne Airport (35.6mppa).³³ The airport has two terminals—a domestic and an international terminal.

Brisbane Airport can accommodate both short- and long-haul services based on the infrastructure and facilities available at the airport. This is relevant in understanding the type of airports with which it is likely to compete. For example, it may compete with small regional airports located nearby for short-haul services as well as with large airports that are further away for certain passenger groups—for example transfer or leisure passengers—and for airline services.

³¹ See: <https://bne.com.au/corporate/about/quick-facts>, accessed 13 August; Australian Government Department of Infrastructure, Regional Development and Cities, 'Airport traffic data', June 2018.

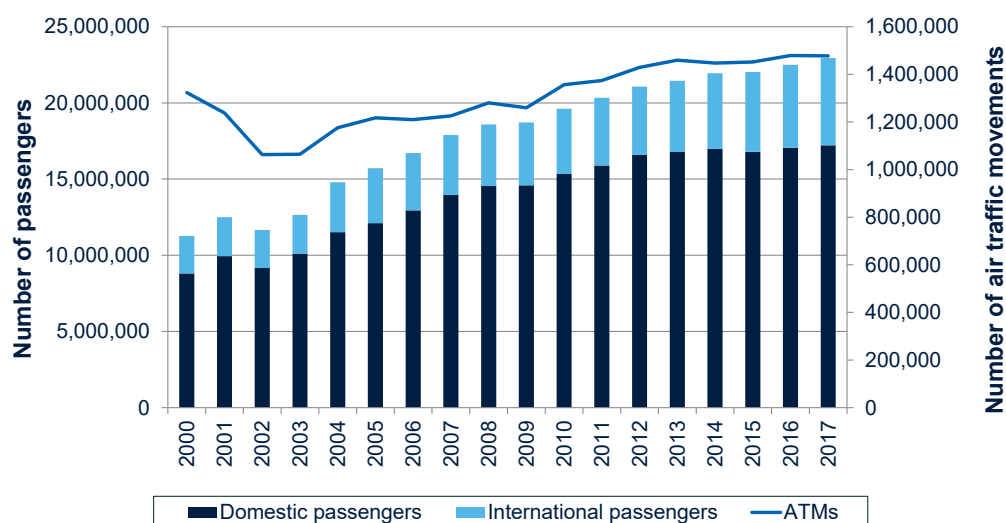
³² See <https://bne.com.au/corporate/about/quick-facts>, accessed 13 August.

³³ Australian Government Department of Infrastructure, Regional Development and Cities, 'Airport traffic data', June 2018. Based on revenue passengers.

3.1.1 Traffic at Brisbane Airport

Figure 3.1 illustrates the number of passengers and ATMs at Brisbane Airport between 2000 and 2017. It shows that passenger numbers increased in each year (with the exception of 2002, due to the September 11th attacks), with the airport attaining its highest passenger numbers in 2017. The compound annual growth rate (CAGR) between 2000 and 2017 was 4% (between 2010 and 2017 it was lower at 2%). This trend is also similar for ATMs. The CAGR between 2000 and 2017 (and between 2010 and 2017) was, however, lower at 1%, suggesting a trend towards the use of larger aircraft at the airport.

Figure 3.1 Passenger traffic and ATMs at Brisbane Airport: 2000 to 2017



Note: based on revenue passengers.

Source: Australian Government Department of Infrastructure, Regional Development and Cities, 'Airport traffic data', June 2018.

The number of international passengers at Brisbane Airport has increased from 2.5m in 2000 to 4.3m in 2010 and 5.7m in 2017—this corresponds to an increase from 22% to 25% of traffic at the airport over the period. The proportion of international passengers has only increased slightly despite the large growth in absolute numbers due to the growth of domestic traffic at the airport. We also note that this data is based on the first port of call of passengers, and therefore the proportion of international passengers increase when considering passengers travelling between Brisbane and another Australian airport for a flight to an international destination.

Brisbane accounts for 11% of Australia's air freight (by volume).³⁴ However, most of this freight is carried in the belly hold of passenger planes (rather than through dedicated freighter aircraft) and therefore tends to follow passenger demand. As a result, this report focuses on passengers and passenger airlines in assessing the degree of competition faced by Brisbane Airport.

3.1.2 Destinations offered from Brisbane Airport

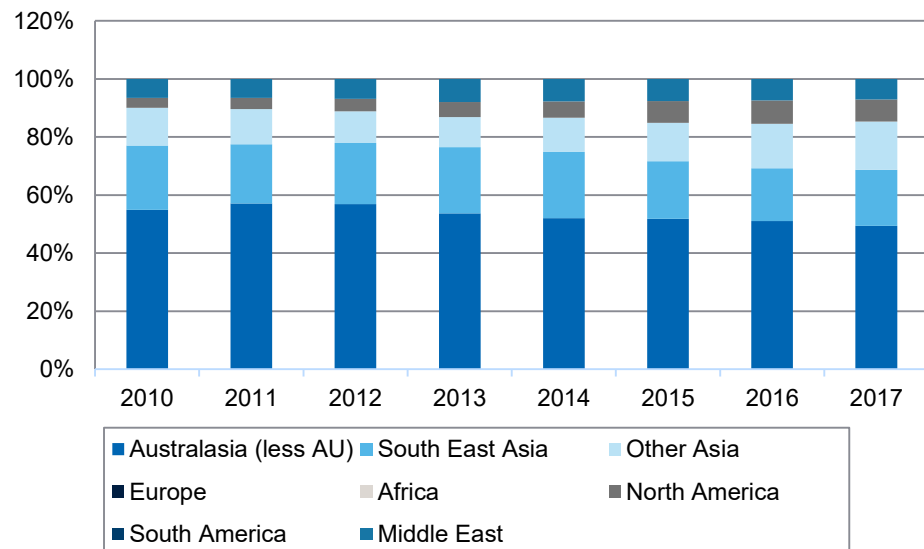
As of March 2018, there were 52 domestic destinations and 32 international destinations offered from Brisbane Airport.³⁵ Figure 3.2 shows the international

³⁴ Australian Airports Association (2018), 'Airport Fact Sheet', February.

³⁵ See: <https://bne.com.au/corporate/about/quick-facts>

destinations offered from Brisbane Airport separated by region, based on departing ATMs.³⁶

Figure 3.2 International destinations offered from Brisbane Airport



Source: Oxera analysis based on IATA data.

This indicates that Australasia,³⁷ excluding Australia, accounts for the majority of ATMs at the airport, although this proportion declined over the period.³⁸ The largest proportion of Australasia flights are to New Zealand—on average 61% to 64% of ATMs over the period. South East Asia and Other Asia were the next most significant regions where flights are offered from Brisbane Airport.³⁹

Figure 3.3 sets out a map of the routes offered from Brisbane Airport.

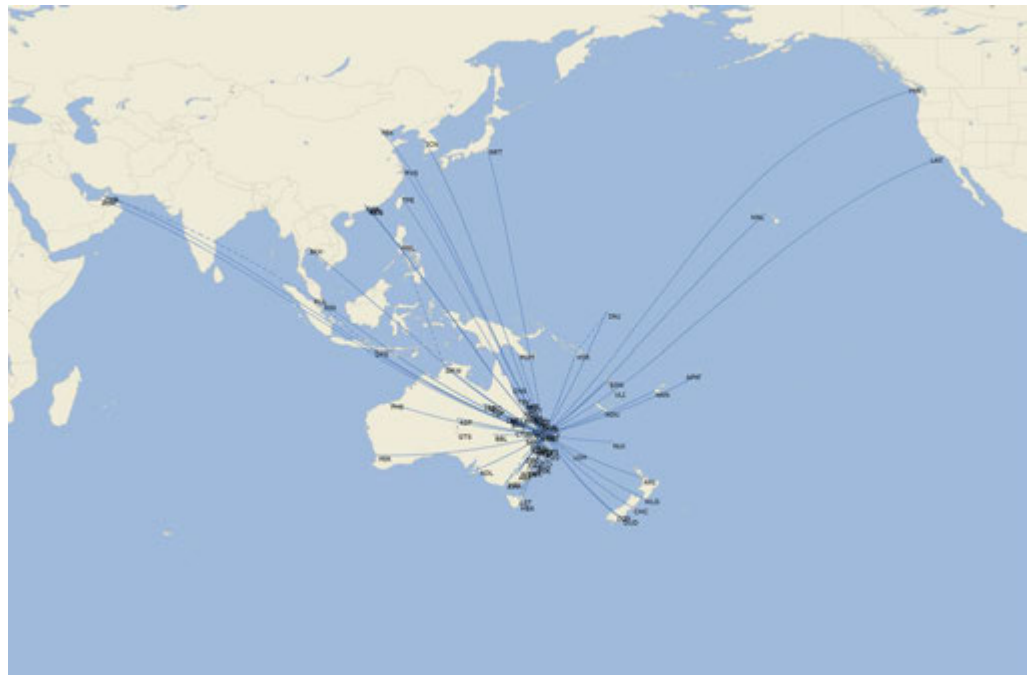
³⁶ The analysis in this report only includes flights to destinations that can be accessed directly from Brisbane Airport or with one-stop. For example, a flight from Brisbane-Dubai-Europe would show as Europe in the dataset. A flight from Brisbane-Dubai-Europe-Africa would not be included in the dataset. Therefore, it would not capture that Africa can be accessed from Brisbane Airport with two stops. As very few passengers take flights with more than one stop, we do not consider that this is likely to materially affect the results of the analysis.

³⁷ Australasia is defined in the IATA dataset to include: French Polynesia, Australia, New Zealand, Western Samoa, Cocos (Keeling) Islands, East Timor, Solomon Islands, Nauru, Papua New Guinea, Fiji, Norfolk Island, New Caledonia, Cook Islands, Vanuatu, Tonga and Christmas Island.

³⁸ The trend is similar when considering seat capacity, though we note that the proportion of capacity accounted for by Australasia is lower than the proportion of ATMs.

³⁹ South East Asia is defined as: Burma, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam. Other Asia is defined as all other destinations in Asia.

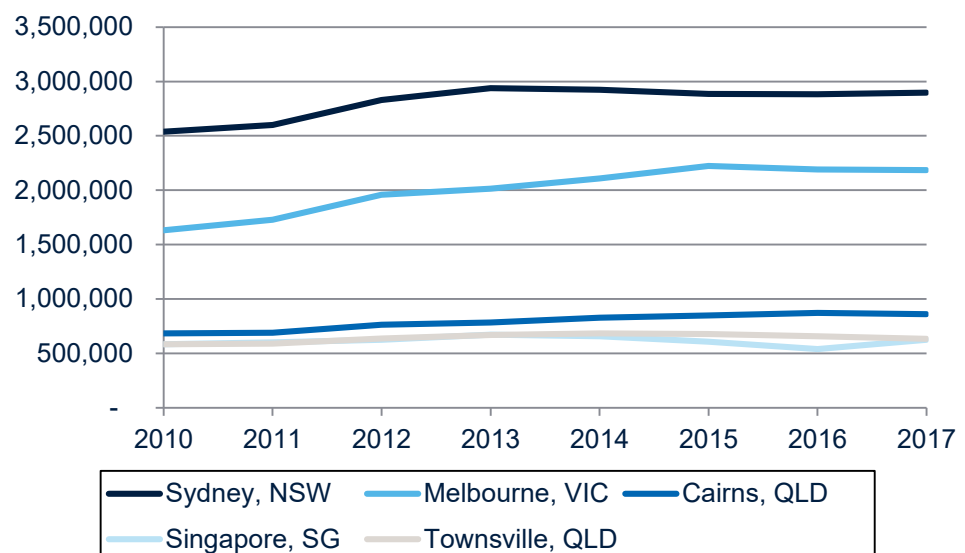
Figure 3.3 Brisbane Airport route map



Note: Based on 2017 routes.
Source: Oxera analysis based on IATA data.

Figure 3.4 illustrates the capacity (in terms of total seats) for the five busiest routes at Brisbane Airport in 2010 and how these have evolved over the period to 2017. Four of the top five busiest routes from Brisbane Airport are domestic. Singapore was in the top five in 2010, but in 2017 it fell to sixth and Auckland replaced it in the top five.

Figure 3.4 Top five routes at Brisbane Airport: 2010–2017



Note: Each 'route' is defined as a flight from Brisbane Airport to the immediate destination. Based on spa.

Source: Oxera analysis based on IATA data.

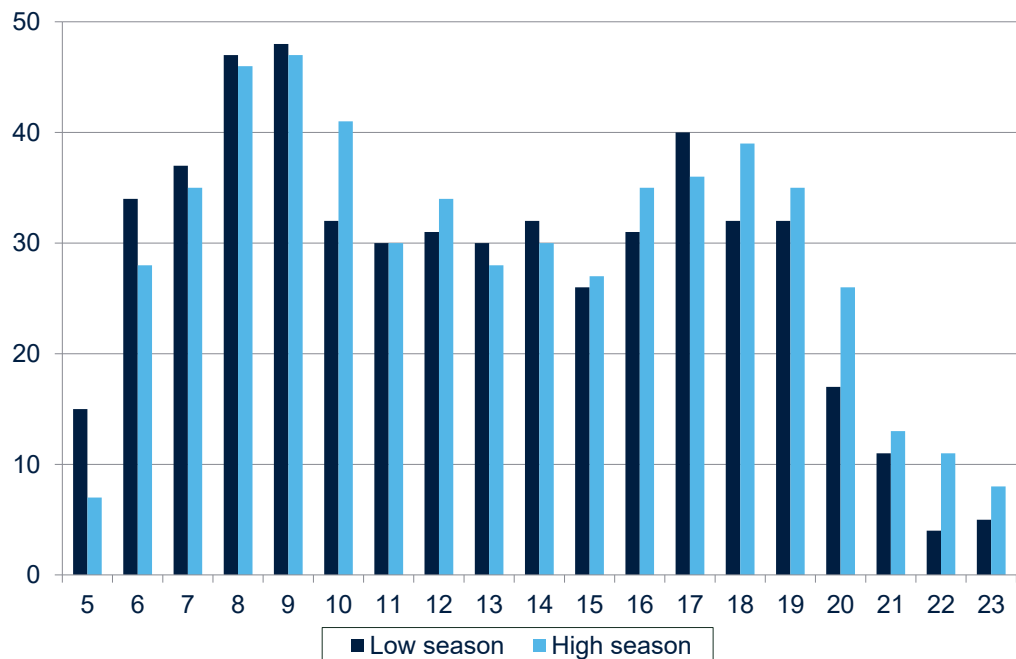
3.1.3 Capacity at Brisbane Airport

Different parts of the airport, such as the runway, apron and terminal, can have different capacity limits. The capacity of the airport overall is determined by the part of the airport that has the lowest capacity.

If an airport is capacity-constrained, it may have reduced incentives to compete strongly with other airports (e.g. to win airline business). The bargaining power of airlines may also be weakened, as there are other airlines willing to serve that airport if current airlines leave—in other words, there are other airlines that would enter quickly to fill the capacity at the airport.

Brisbane Airport can currently accommodate 50 ATMs in any 60-minute period. As shown in Figure 3.4, it comes close to this maximum during the morning peak period, in both the low and the high seasons, although there is a significant amount of spare capacity at many other times of the day. We note that Brisbane Airport has begun work on a new runway, which it is planning to open in 2020. This new runway will allow the airport to double its current capacity.

Figure 3.4 ATMs by hour of day at Brisbane Airport (2017)



Note: For the high season, data is based on Monday 3 July 2017. For the low season, data is based on Monday 6 February 2017. These dates were chosen as representative examples from the busiest and least busy months at Brisbane Airport in terms of passenger numbers and ATMs.

Source: Oxera analysis of IATA data.

Capacity constraints need to be considered carefully. An airport can be capacity-constrained at a particular point in time or time of the day, but it may be able to increase capacity relatively easily by innovating to increase throughput within the existing facilities. For example, even without investing in new infrastructure, an airport might be able to increase capacity by incentivising use of larger aircraft or improving the efficiency of its operations to address capacity constraints.

Importantly, the extent to which capacity constraints affect competition also depends on the capacity constraints at other airports to which airlines could switch. For example, if a given airport is capacity-constrained, but there are other airports that have additional capacity, then airlines and/or passengers may be able to switch. In contrast, if other airports are also capacity-constrained, then airlines and passengers may be less able to switch.

Other airports in the region have recently expanded or are planning expansions to increase capacity. As mentioned in section 2, Toowoomba Wellcamp Airport, which is located 120km from Brisbane Airport, opened in 2014 to accommodate growth in the local area. The airport now has over 80 weekly services, including regular flights to Sydney on Qantas, as well as flights by Airnorth and Regional Express to Cairns, Darwin, Melbourne and other Australian regional airports (from which international connections can be made).

Sunshine Coast Airport has recently embarked on an expansion project to extend its runway. The new runway will give the airport the potential to attract 2mppa and to reach new destinations in Australia, Asia and the Western Pacific that cannot currently be serviced with direct flights to/from the Sunshine Coast.⁴⁰ The project will be completed by the end of 2020.

The Gold Coast Airport has also started a major development plan for terminal building expansion and redevelopment, construction of additional aircraft stands and taxiways and improvements to ground transport facilities.⁴¹ The expansion is expected to be complete in early 2021 and will double the airport's existing capacity to be able to handle 16mppa by 2031.⁴²

3.1.4 Brisbane Airport's revenue sources

Like other airports, Brisbane Airport carries out two main types of activity, which have associated revenue streams:

- **aeronautical revenue:** income from charges to airlines for use of the airport (including landing, passenger and parking charges);
- **non-aeronautical revenue:** revenue from commercial activities (often by third parties) at the airport's premises, such as retail and food outlets, car parks, property and advertising.

On average, since 2010, aeronautical revenue has accounted for 38% of Brisbane Airport's total revenue, while non-aeronautical revenue accounted for 62%.⁴³ The proportions have remained fairly stable between 2010 and 2017.

Airports are often viewed as multi-sided markets. Such markets consist of a firm whose product acts as a platform bringing together various end-users. In the context of airports, the markets include airlines, passengers, air freight providers and retail services. There are demand dependencies between the

⁴⁰ Sunshine Coast Regional Council 2018. See: <https://www.sunshinecoast.qld.gov.au/Council/Planning-and-Projects/Major-Regional-Projects/Sunshine-Coast-Airport-Expansion-Project>, accessed 13 August.

⁴¹ Chong, J. (2018), 'Gold Coast Airport's Commonwealth Games Legacy', Australian Aviation, 19 June.

⁴² See: <https://www.airport-technology.com/projects/gold-coast-airport-terminal-redevelopment/>, accessed 13 August; Nichols, N. (2017), 'Gold Coast Airport expands its horizons', March. Available at: <https://wearegoldcoast.com.au/articles/airport-expands-horizons/>, accessed 13 August.

⁴³ Aeronautical revenue excludes government mandated security revenue, which is included in the non-aeronautical revenue category. Non-aeronautical revenue also includes: landside transport revenue, retail revenue, investment property revenue, operating property revenue and other revenue. Based on Brisbane Airport Company's annual reports.

groups that affect the company’s revenue. In other words, the price charged on one side of the market affects the demand on the other side of the market.

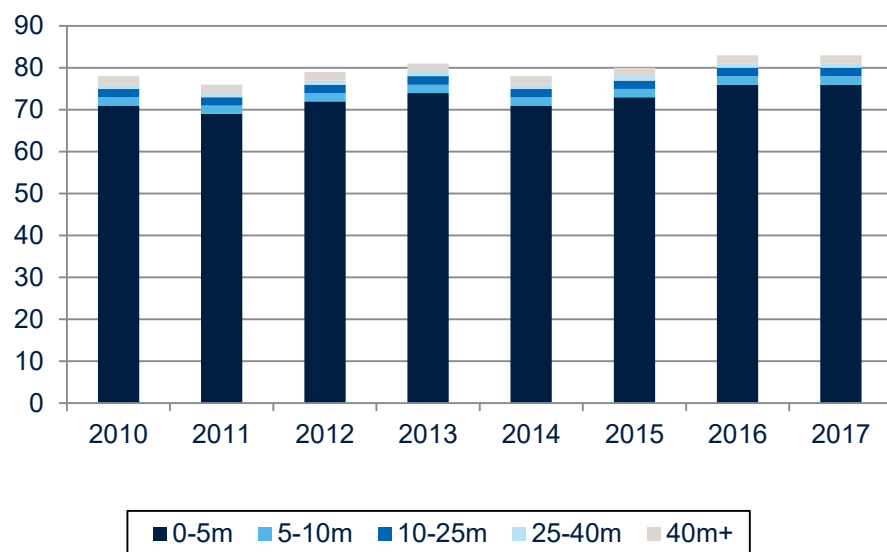
Given that Brisbane Airport’s primary function is to provide access to the infrastructure for aircraft to transport passengers, this assessment focuses on aeronautical activities. However, as discussed in the previous section, Brisbane Airport’s incentive to potentially increase price or reduce quality would be affected due to its potential negative impact on its non-aeronautical revenue. For instance, if airlines or passengers switch away from the airport, the airport would lose both aeronautical and non-aeronautical revenue.

3.2 Overview of Australian aviation market

This section looks at developments in the Australian aviation market since 2010 that are relevant to consider in the context of understanding the competitive constraints faced by Brisbane Airport. We also look at some of these trends separately for (South East) Queensland. We focus on the key developments that affect the extent to which airports compete.

There were 78 airports in Australia with over 1,000 ATMs in 2010. This has fluctuated over the years, but increased to 83 in 2017.⁴⁴ The vast majority of airports in Australia, nearly 92% in 2017, have less than 5 million seats per annum (mspa).⁴⁵ Across the period considered there were two airports with 10–25mspa (Perth and Adelaide), one airport with 25–40mspa (Brisbane) and two airports with over 40mspa (Sydney and Melbourne).

Figure 3.5 Australian airports, by size category



Note: mspa, million seats per annum.
Source: Oxera analysis of IATA data.

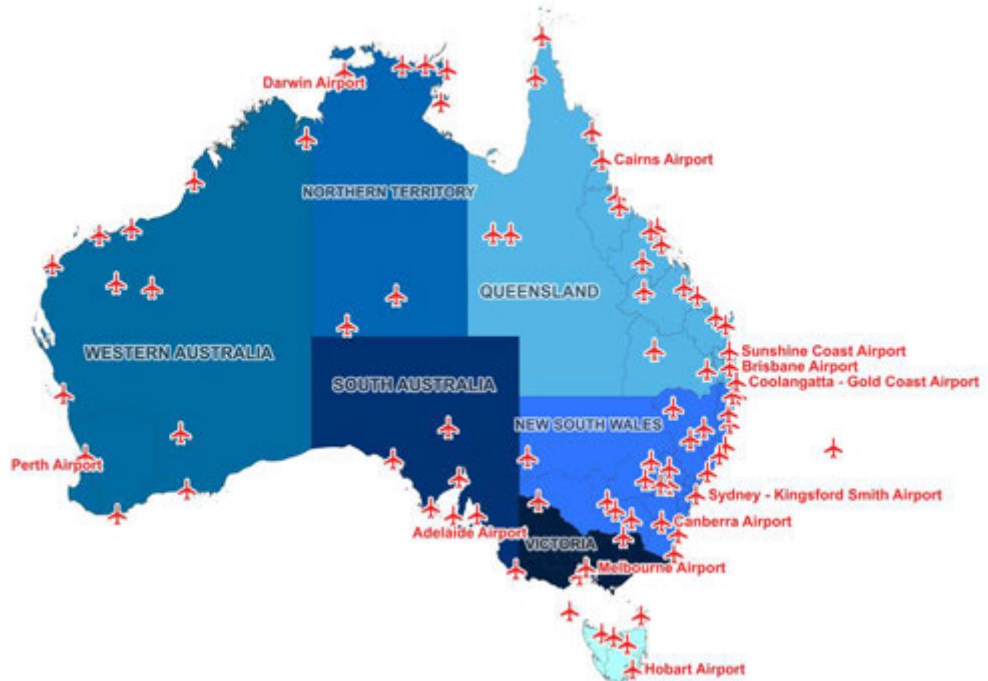
This indicates that there are a large number of small airports in Australia acting as secondary or regional gateways. However, there also some very large airports, including two airports that are larger than Brisbane Airport. Indeed,

⁴⁴ The analysis in this report only includes airports that have at least 1,000 ATMs in a particular year. Therefore if an airport was below 1,000 ATMs in 2010 but grew above this level in 2011 and for subsequent years, it would only be included in the analysis from 2011 onwards. If all airports are included in the analysis, the number of airports would increase from 118 in 2010 to 130 in 2017.

⁴⁵ We note that the analysis in this and subsequent sections refers to capacity (i.e. seats) rather than passenger numbers. Passenger numbers will be lower than capacity as load factors are typically less than 100%.

Sydney and Melbourne airports accounted for 40% of ATMs and 48% of seat capacity across Australia in 2017. Brisbane Airport accounted for 13% of ATMs and 14% of seat capacity. Figure 3.6 shows the location of airports in Australia with more than 1,000 ATMs in 2017.

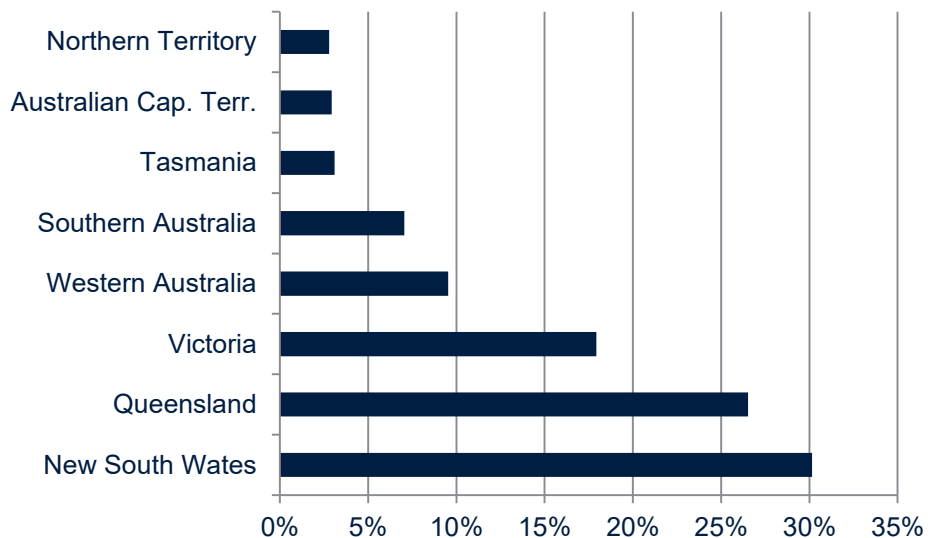
Figure 3.6 Map of Australian airports



Note: Only includes airports with more than 1,000 ATMs in 2017.
Source: Oxera analysis based on MapInfo.

Figure 3.7 shows how ATMs are distributed across the different States and Territories in Australia. Queensland had approximately 27% of ATMs in 2017, second to only New South Wales, which had 30% of ATMs.

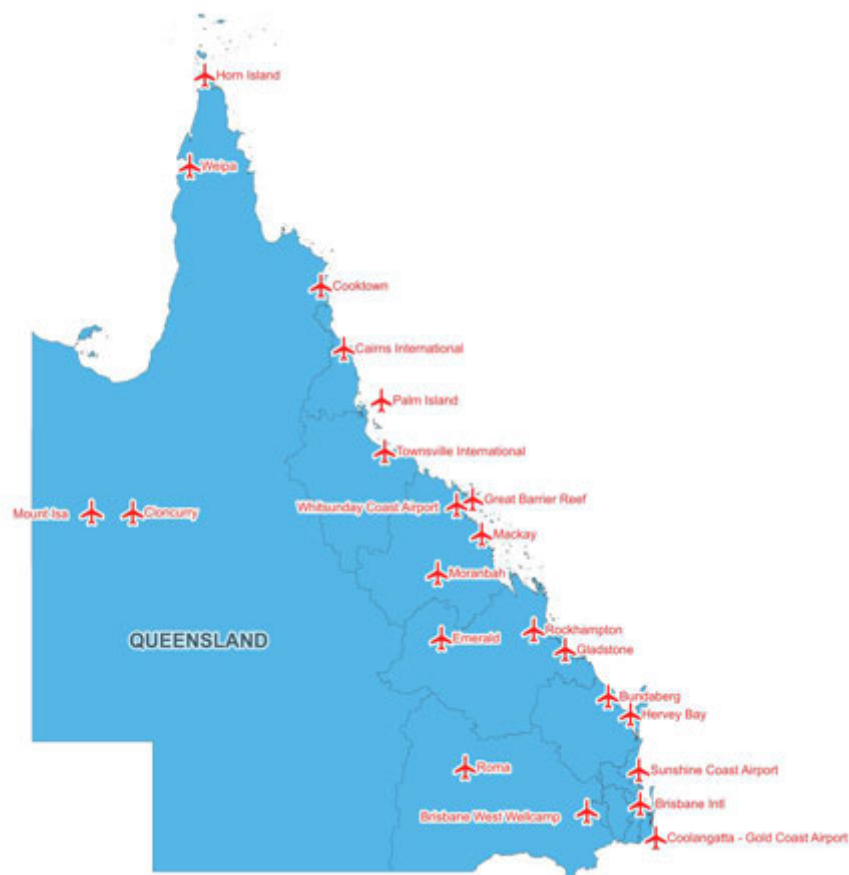
Figure 3.7 ATMs by state and territory, 2017



Source: Oxera analysis based on IATA.

Figure 3.8 illustrates where the airports in Queensland are located in more detail.

Figure 3.8 Map of airports in Queensland



Note: this only includes airports with more than 1,000 ATMs in 2017.
Source: Oxera analysis based on MapInfo.

Brisbane is the largest airport in Queensland with 56% of its overall seat capacity in 2017.⁴⁶ Gold Coast Airport (OOL) is next with 15%, Cairns Airport (CNS) has 12% and Sunshine Coast Airport (MCY) has 3% of Queensland's seat capacity.

3.2.1 Growth of the market

The aviation market in Australia has grown since 2010. Seat capacity grew by 23% between 2010 and 2017. As mentioned in section 3.1.1, the growth in ATMs was lower, indicating that the growth was primarily a result of airlines using larger aircraft rather than increasing the number of flights. However, ATMs did grow by 14%. This implies that a number of new aircraft have been introduced to the market, providing scope for airports to compete for growth, as discussed in further detail in section 4.

This growth (in terms of both seat capacity and ATMs) has been distributed differently across Australia. Focusing on the states with the three largest airports—New South Wales (Sydney), Victoria (Melbourne) and Queensland (Brisbane)—Victoria has experienced growth in seat capacity that has exceeded that of Australia as a whole (as well as that of QLD and NSW).

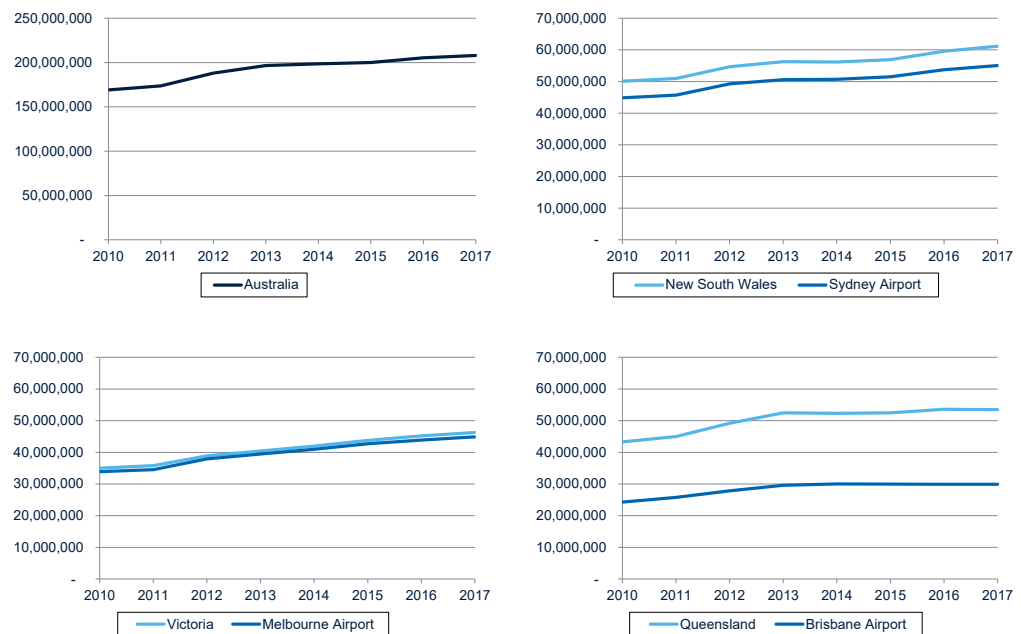
⁴⁶ This is 51% if considered based on ATMs.

However, the growth rate of ATMs in QLD and VIC was faster than NSW and Australia as a whole.

The growth rates of each of Sydney, Melbourne and Brisbane airports tracked their respective state's overall growth rate in terms of capacity quite closely. This is also true for ATMs at Sydney and Melbourne, however ATMs at Brisbane Airport grew at a lower rate relative to Queensland. This suggests that competing airports to Brisbane increased their share of ATMs more than competing airports to Melbourne or Sydney.

Figure 3.9 also highlights another possible reflection of the competitive pressures faced by Australia's largest airports. Sydney and Melbourne airports each constitute a significant proportion of their respective states' traffic. On the other hand, BNE constitutes significantly less of Queensland's overall seat capacity (56%, as noted above).

Figure 3.9 Market growth (spa), 2010–2017



Source: Oxera analysis based on IATA.

3.2.2 Composition of the Australian aviation market

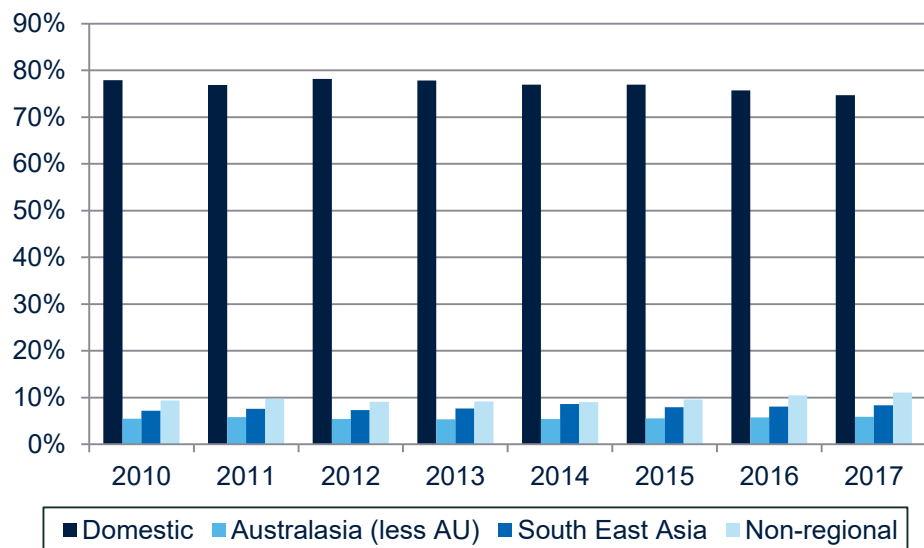
The analysis below sets out the composition of traffic in the Australian market and changes that have occurred between 2010 and 2017 as this can have implications for competition between airports.

Figure 3.10 shows that the majority of air passenger travel in Australia is domestic, though this declined from 78% of overall seats in 2010 to 75% in 2017 due to international traffic growing faster than domestic traffic.⁴⁷ Indeed, international capacity grew by 41% over the period compared to 18% for domestic. This is relevant in considering competition for airline services in the next section as international airlines may have more outside options in terms of where they operate their services to/from and therefore may have stronger countervailing buyer power.

⁴⁷ Based on ATMs there was a change from 88% in 2010 to 86% in 2017.

The two other main regions to which destinations are offered from Australian airports are Australasia (not including Australia)⁴⁸ and South East Asia.⁴⁹

Figure 3.10 Destinations offered from Australian airports



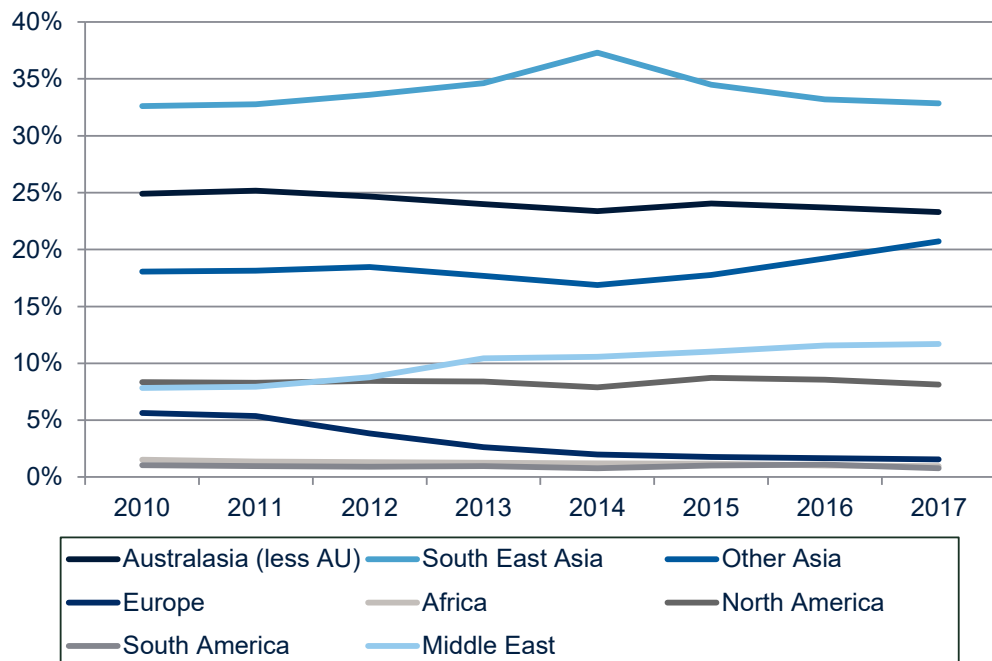
Note: based on mspa to destinations that are no more than one-stop away from the initial airport.
Source: Oxera analysis of IATA data.

Figure 3.11 below sets out more detail on the international destinations that can be reached from Australian airports. This indicates that the share of seats to different regions has remained relatively constant over time, though there has been a slight decline in seat capacity to Europe and an increase in capacity to the Middle East and Asia (not including South East Asia). A similar picture is evident when looking at ATMs. The increase in Middle East destinations is likely to be in part due to the rise of the Middle Eastern carriers—the total number of seats offered by Emirates, Etihad and Qatar increased from approximately 3.7mspa in 2010 to 7.2mspa in 2017.

⁴⁸ Australasia is defined in the IATA dataset to include: French Polynesia, Australia, New Zealand, Western Samoa, Cocos (Keeling) Islands, East Timor, Solomon Islands, Nauru, Papua New Guinea, Fiji, Norfolk Island, New Caledonia, Cook Islands, Vanuatu, Tonga and Christmas Island.

⁴⁹ South East Asia is defined as: Burma, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam.

Figure 3.11 International destinations offered from Australian airports



Notes: Based on mspa.
Source: Oxera analysis of IATA data.

When considering the destinations offered from airports located in Queensland, 80% of seats were to destinations within Australia in 2017. Of the international destinations, the main ones offered were in Australasia, South East Asia and Asia.

3.2.3 Types of airlines

One way to segment airlines is by business model. A key distinction that is used is low-cost carriers (LCCs) and full-service carriers (FSCs). Although there is no commonly accepted definition of LCCs and FSCs, we have adopted the categorisation of LCCs provided by IATA. FSCs are defined as all other airlines, including airlines that are members of a global airline alliance (Sky Team, One World or Star Alliance) as well as airlines such as Emirates, Etihad and Virgin Australia.

There may be some differences in the infrastructure needs of these two types of airlines. For instance, LCCs tend to have fewer requirements for facilities, such as aero bridges, or for transfer passengers and their baggage. FSCs have historically tended to have more heterogeneous passengers (e.g. leisure and business, transfer and point-to-point) and FSCs that operate hub-and-spoke models may require feeder traffic from short-haul flights (either from their own airline or code share) to make certain flights viable. For this reason, LCCs tend to have more bases as they do not rely on the networks that some FSCs do to ensure that they can offer connections between flights. However, many FSCs now have strategies of using multiple bases (e.g. Qantas) or have extended their potential bases through mergers or partnerships (e.g. Emirates and Qantas) and therefore have the ability to relocate some of their capacity to alternative airports.

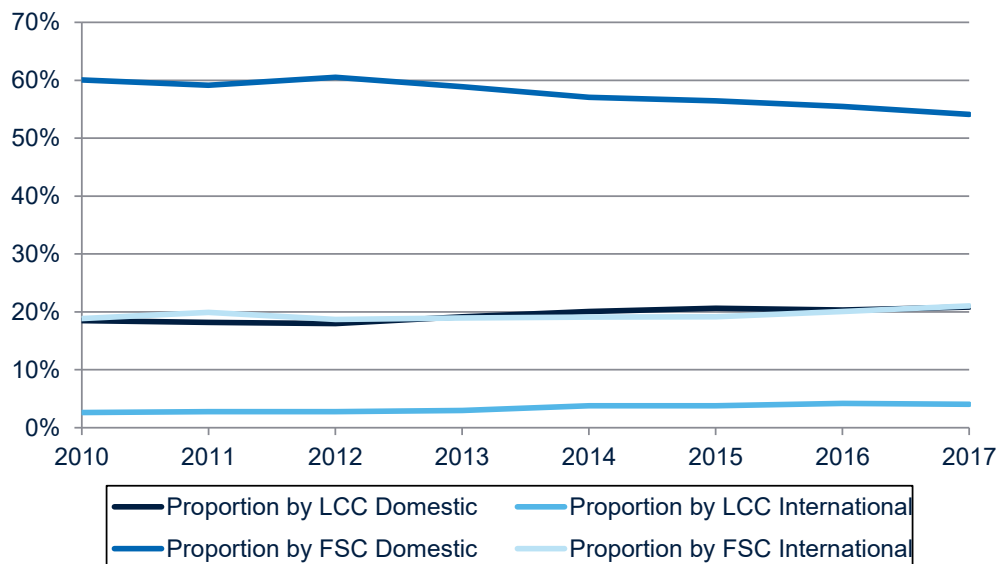
Indeed, there has been a lessening of the distinction between FSCs and LCCs over the last few years, and airlines can be considered along a spectrum rather

than in two distinct categories. The recent strategy of LCCs forming alliances is an example of such convergence between business models.

However, airlines with business models that more closely resemble the LCC model may be more willing and able to switch between airports. Charges also make up a higher proportion of the overall cost base for LCCs,⁵⁰ suggesting that they may have a greater potential responsiveness to a change in price by the airport. This is discussed further in the following section.

Figure 3.12 shows that LCCs have increased their presence over the period from 21% to 25% of overall seat capacity, with a corresponding decline in seat capacity accounted for by FSCs. This appears to be driven by a change in FSCs and LCCs in the market for domestic flights, with the former declining from 60% to 54% over the period. On the other hand, the growth of both FSCs and LCCs have contributed to the growth in international flights.

Figure 3.12 Airlines in Australia, by business model (mspa)



Source: Oxera analysis of IATA data.

Brisbane Airport has a lower proportion of LCCs and a lower growth rate of LCCs compared to Australia as a whole, Melbourne Airport and Sydney Airport. This may be in part because historically a number of LCCs decided to set up their bases and operate flights from other airports instead. For instance, Jetstar and Tiger both set up bases at Gold Coast Airport (in 2004 and 2007 respectively) instead of at Brisbane. Brisbane is also the only airport major not to have services offered by Air Asia and Scoot as they have instead chosen to fly from secondary airports (e.g. Gold Coast) and other major airports (e.g. Sydney and Melbourne).

3.3 Conclusion

The aviation market in Australia, Queensland and at Brisbane Airport has grown since 2010, both in terms of seat capacity and ATMs. This has been driven by a growth in domestic and international traffic, with some changes in the proportion of flights offered to different destinations. There has also been a small increase in the proportion of LCCs in the market, however this has been

⁵⁰ See, for example, Civil Aviation Authority (2012), 'Gatwick – Market Power Assessments, Non-confidential version', p. 49, Figure 19.

less marked at Brisbane Airport given that a number of these airlines have decided to operate from Gold Coast Airport instead.

While there are only five airports in Australia with more than 10mppa, there are a number of small and medium-sized airports which act as secondary and regional gateways. Indeed, the airports in Queensland other than Brisbane Airport have increased their share of the state's overall ATMs since 2010. Many of these airports are located near Brisbane Airport and therefore airlines may consider them in competition with one another when looking to tap into the same passenger demand. This competitive constraint may increase going forward as a number of these airports, as well as Brisbane Airport, are expanding their capacity to attract more passengers and airlines. For airports that are further from Brisbane, airlines may still consider them in competition for either existing or new airline services. This is discussed in the following section.

4 Competition for airlines

One way to determine whether airports compete for airline services is to consider whether there are overlapping routes or destinations offered from the airports. However, it may be the case that, in addition to competition in the market for routes to different destinations, there is competition for the market for a particular service. For instance, an airline may have one new aircraft that it can allocate to serving an airport. Airports may compete with one another—for example, in terms of the incentives or marketing support offered—to get this airline to operate from its airport. Therefore, even if airports do not serve the same routes, this does not necessarily indicate that they are not competing with one another. Airlines may also have countervailing buyer power that they can exert on the airports from which they currently operate. This is discussed further below, while the key messages from this section are set out in Box 4.1.

Box 4.1 Key messages

- The top four airlines at Brisbane Airport—Qantas, Virgin, Jetstar and Tiger—have 79% of capacity at the airport. These airlines also have significant operations across other Australian airports, including Sydney and Melbourne, and they have been able to shift capacity between these airports over the last several years.
- The extent to which airlines can change frequencies or open and close routes at an airport can provide an indication about both the degree of competition that is likely to occur between airports for new routes (when routes open) and the extent to which airlines are able to move capacity between airports in response to, for example, an increase in charges by an airport. Brisbane Airport has a higher route churn rate than the other Australian airports with more than 5mppa (i.e. Cairns, Gold Coast, Adelaide, Perth, Melbourne and Sydney).
- Airlines do tend to place airports in competition with one another when starting new routes. As a result, Brisbane Airport has a team that carries out a significant amount of due diligence, which historically would have been performed by airlines rather than the airport. Brisbane Airport also often finds that it needs to offer incentives or marketing support in order to attract airlines to operate from the airport.

4.1 Countervailing buyer power

In addition to looking at the degree of competition between airports, a question that is relevant to consider is the extent of buyer power of airlines at the airport. Buyer power is more likely to play a significant role at airports where a small number of airlines make up the majority of capacity. This is because the switching of just some of the aircraft of one, or a few airlines, could have a significant effect on the airport's profitability. Therefore, actual switching, or even just the credible threat of switching some capacity away from the airport, may be sufficient to constrain the behaviour of the airport.

At the same time, if one airline has most of its capacity at an airport, then it may be that the airline is dependent on the airport. This does not mean that the airline is unable to switch, but it may be less likely to do so than an airline that has multiple bases at different airports. It may also reflect the fact that the airline uses this airport to operate an interdependent network of flights, where the economics of one flight are tied to the operation of others, so removing just one flight could affect the viability of other routes, making it less likely to shift any capacity. Therefore, considering the co-dependence of airlines on the

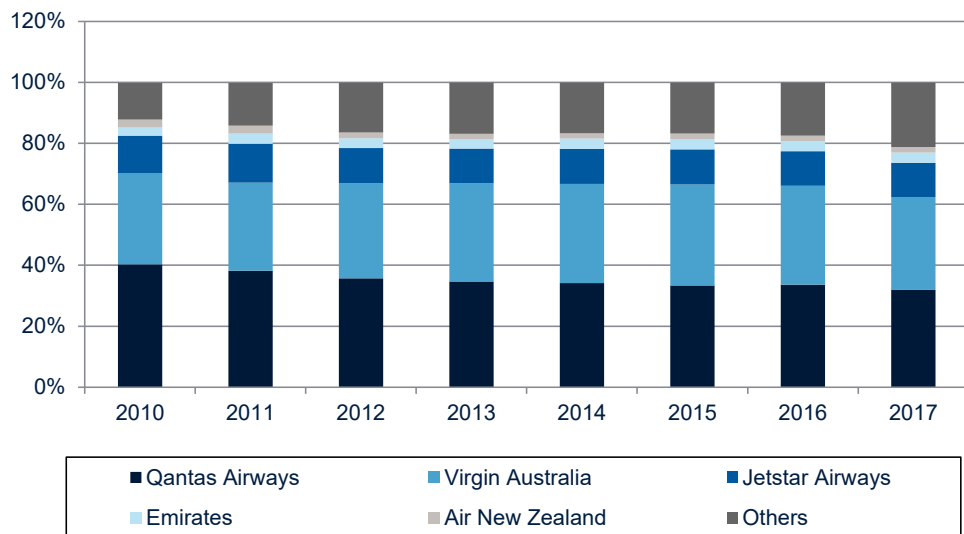
airport is also important in understanding their degree of countervailing buyer power.

There are four main airlines with bases in Australia. Qantas is based at Sydney Airport, but its capacity is split across a number of Australian airports—with 29% of its capacity at Melbourne, 21% at Sydney and 16% at Brisbane in 2017. Tiger and Jetstar are based at Melbourne, but they have significant amounts of capacity across airports in Australia, including at Brisbane. While Virgin has offices in Brisbane, more of its capacity is operated out of Sydney and Melbourne airports.

The shares of Qantas’ and Virgin’s traffic at Sydney, Melbourne and Brisbane airports have remained broadly constant between 2010 and 2017. On the other hand, from 2010 to 2017, Jetstar increased its presence at Sydney (from 18% to 24%) and Melbourne (from 21% to 23%) and reduced its presence slightly at Brisbane (from 11% to 9%). In the same period, Tiger increased its capacity at Melbourne (from 17% to 26%) and Brisbane (from 6% to 14%) while reducing its capacity at Sydney (from 38% to 30%). This may indicate the flexibility in the LCC business model in terms of the ability of airlines to expand and/or contract their presence across different airports.

Figure 4.1 sets out the evolution of airline shares of the top five airlines at Brisbane Airport between 2010 and 2017 by seat capacity.

Figure 4.1 Airlines shares at Brisbane Airport: 2010 to 2017



Note: Based on mspa.
Source: Oxera analysis of IATA data.

There was one new airline, Tiger Airways, among the top five in terms of capacity at Brisbane in 2017 compared to 2010. There was also a growth in the ‘other’ category of airlines, perhaps signifying the increasing presence of smaller airlines in the market.

As noted by the Productivity Commission, airports can be constrained in exercising their market power by the countervailing power of users, especially airlines. When an airline makes up a large percentage of an airport’s passenger movements, it could withdraw or threaten to withdraw, leaving the

airport with a significant loss of revenue. This potential loss of an airline could constrain airports from raising their aeronautical charges excessively.⁵¹

As illustrated above, Virgin and Qantas each have about one third of the capacity at Brisbane Airport, combining for 62% or 67% when including Tiger. The top four airlines—i.e. including Jetstar Airways—have 79% of capacity. If just one of these airlines moved some of its capacity away from Brisbane Airport, this could have a significant effect on the airport's profitability (as demonstrated by the critical loss analysis in section 2).

Indeed, these airlines may be easily able to switch between airports, as Qantas and Virgin are also the top two airlines at Melbourne and Sydney airports. These airlines have more capacity at Brisbane compared to Sydney and Melbourne (62% compared to 52% and 51% respectively), indicating that they may be able to exert greater power over the airport. However, at the same time, this indicates that these airlines have significant operations at all three airports (as well as other airports across Australia) and have a number of outside options in terms of where they can operate services.

Jetstar and Tiger Airways were also among the top four airlines at Sydney and Melbourne in 2017. These airlines may therefore also be able to shift their capacity between these (and potentially other) airports in response to changes in charges.

4.2 Case study: negotiations between airlines and airports

Before reviewing data on the extent to which airlines switch between airports, it is useful to understand the context of how airlines and airports negotiate with each other. In order to do so, we held a discussion with members of Brisbane Airport's Business Development (ABD) team, covering a number of areas:

- how Brisbane Airport targets potential new routes and airlines;
- how Brisbane Airport then engages and negotiates with airlines in order to establish these routes;
- circumstances in which airlines may threaten to shift capacity away.

4.2.1 How does Brisbane Airport target potential routes?

In order to assess where there might be potential for new routes, Brisbane Airport adopts a quantitative and evidence-based approach by reviewing data on how passenger traffic to particular geographies is evolving. For instance, increasing traffic that is ultimately destined for an unserved destination (which may currently be using connecting services) might point towards that being a potential destination where a new direct route from Brisbane Airport would be financially viable. In addition to estimating total demand for particular routes, we understand that Brisbane Airport will consider the patterns of demand (with airlines preferring steady rather than seasonal demand profiles) and the potential yields which airlines might be able to earn when operating a new route. Other relevant factors include the services currently being offered to such destinations by airports that Brisbane Airport considers itself in competition with, such as Sydney, Melbourne, the Gold Coast, Sunshine Coast and Cairns airports.

This type of due diligence being carried out by Brisbane and other airports is a (relatively) recent phenomenon—Brisbane Airport noted that 20 years ago it

⁵¹ Productivity Commission (2018), 'Economic Regulation of Airports', Issues Paper, July, p. 6.

did not have an ABD team, with the focus of the airport more on issues such as airside and security logistics. The growth in low-cost carriers placed more of an onus on airports to conduct this sort of 'route prospecting' analysis, with work that would have previously been carried out by airlines in effect being transferred to airports.

4.2.2 How does Brisbane Airport engage and negotiate with airlines?

Once potential routes are identified, the airport engages with an airline, or airlines, that might have an interest in serving them. Brisbane's ABD team reported that the process of engaging and building a relationship with an airline starts at least two years before a route commences. New relationships between airlines and airports can be facilitated by representatives of each party meeting at industry events such as route conferences.

As well as an airport presenting evidence regarding the viability of a route it has identified, Brisbane Airport considered that a typical negotiation with an airline might involve discussion of a number of parameters, particularly with regard to 'support' that might be offered to an airline when a route is being established. This may include:

- the degree to which an airport offers discounts on aeronautical charges;
- the degree to which an airport supports the airline by carrying out—or contributing to—marketing efforts;
- (in some circumstances) an outright financial contribution.

In order to achieve the most favourable agreement possible, the ABD team noted that it is commonplace for airlines to place airports in competition with one another on these aspects. This is common practice among airports worldwide.

4.2.3 Airlines threatening to shift capacity away from an airport

In addition, we note that interaction between airlines and airports does not cease once a route commences operations. We understand that most airlines will expect a route to achieve a commercial return within a given period of time; typically, this period would be shorter for a LCC than a more traditional airline.

Airlines are also able to exercise buyer power beyond the point at which a route is established, by threatening to shift capacity elsewhere should better terms not be offered to them. While such negotiations are commercially confidential, there are examples of airlines carrying through with this threat. Brisbane has previously lost services to Gold Coast Airport as passengers were ultimately wanting to visit the Gold Coast, and the airline was looking to cut out the bus trip between BNE and the Gold Coast. Air Asia X has also recently announced that it will move two flights from Melbourne Airport to Avalon Airport at the end of this year.

4.3 Analysing route churn

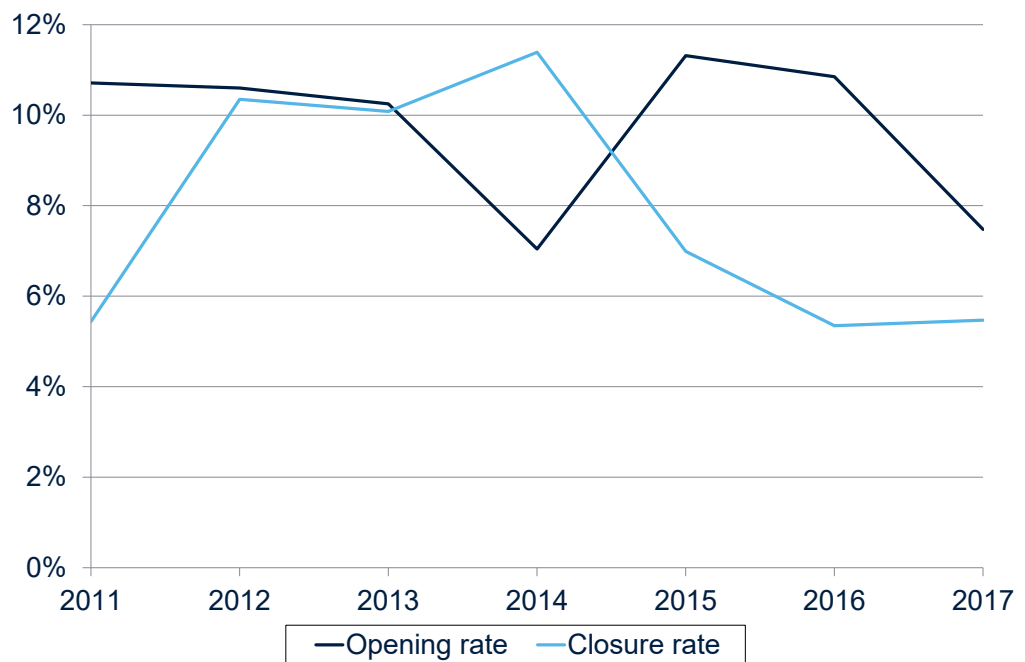
Following the above discussion of how airports and airlines interact with each other, and how this places airports in competition for airlines' services, in this section we consider the degree to which airlines are able to switch their capacity. It is important to note that in order to exercise buyer power, it is only necessary for an airline to credibly threaten to relocate capacity away from an airport. It is not necessarily the case that such a switch must actually occur. However, as data on 'threatened' switches does not exist, we have conducted

our analysis on the basis of actual switches (i.e. route openings or closures) that can be identified from the data.

Airlines may not always open or close routes at an airport as a result of competition with other airports. For example, it could be business-as-usual route optimisation for airlines (e.g. closing underperforming routes, as Hong Kong Airlines recently did at Gold Coast Airport).⁵² However, the frequency with which routes are opened and closed can provide an indication of the ease with which airlines are able to undertake these shifts and therefore the extent to which threats to switch capacity may be credible.

Figure 4.2 illustrates route opening and closure rates of routes to or from Australian airports between 2011 and 2017. Overall, route openings exceeded route closings over this period, meaning that the total number of routes to or from Australian airports grew from 1,195 in 2011 to 1,298 by 2017. In most years, 100 or more routes were opened,⁵³ but these were offset by approximately 65 to 130 routes closing. This indicates that each year there are a significant number of routes added by airlines—which airports may compete to attract—as well as a large number of routes closed, which demonstrates that airports are not necessarily able to take the continuation of a route for granted.

Figure 4.2 Route churn rates at Australian airports, 2011–2017



Note: Analysis excludes flights to or from airports with less than 1,000 ATMs per annum. A route is defined as one service from a unique origin airport to a unique destination airport by a given airline (for instance, if two distinct airlines operated in both directions between Brisbane and Sydney, four routes would be identified). Opening (closure) rates calculated as the number of routes that (do not) operate in a year that did (not) operate in the year before, divided by the total number of routes in operation in that year.

Source: Oxera analysis of IATA data.

⁵² See Flynn, D. (2018), 'Hong Kong Airlines axes Gold Coast, Cairns flights', Australian Business Traveller, 3 June, <https://www.ausbt.com.au/hong-kong-airlines-axes-gold-coast-cairns-flights>, accessed 10 August 2018.

⁵³ The exceptions being 2014 and 2017, which saw 81 and 97 openings respectively.

4.3.4 Route churn by airport and airline characteristic

The degree of route churn can be further analysed by considering whether it is differs by type of airport. Table 4.1 calculates the average route opening and closure rates between 2011 and 2017 for Australian airports of different size categories.

Table 4.1 Average route churn rates by airport size, 2011–17

Airport size bracket (mspa)	Airports included	Average route opening rate	Average route closure rate
0–5m	65 airports	11%	10%
5–10m	Cairns, Gold Coast	10%	8%
10–25m	Adelaide, Perth	8%	6%
25–40m	Brisbane	12%	9%
40m+	Melbourne, Sydney	8%	6%

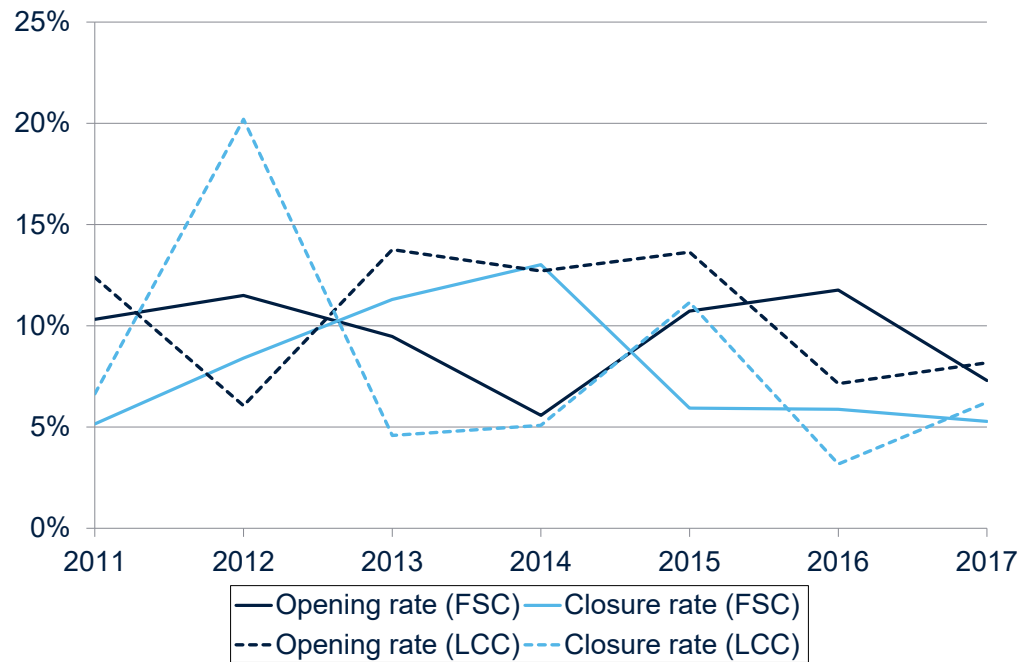
Note: Analysis excludes flights to or from airports with less than 1,000 ATMs per annum. A route is defined as one service from a unique origin airport to a unique destination airport by a given airline (for instance, if two distinct airlines operated in both directions between Brisbane and Sydney, four routes would be identified). Opening (closure) rates calculated as the number of routes that (do not) operate in a year that did (not) operate in the year before, divided by the total number of routes in operation in that year. Based on the size category of the airport from which a route originates.

Source: Oxera analysis of IATA data.

Table 4.1 shows that Brisbane Airport has the highest route churn rates of airports with more than 5m ppa. The two largest airports, Melbourne and Sydney, exhibit very similar average opening and closure rates over the sample period, each with an opening rate of approximately 8% and a closure rate of 5–6%.

In addition to airport type, the analysis can be segmented by airline type, in particular whether the airline is a LCC or FSC. As discussed above, LCCs are typically perceived as being more willing and able to quickly reallocate capacity than FSCs. On average, as illustrated in Figure 4.3, the average opening rate for LCCs is 11% and for FSCs it is 10%. The spike in route closures for LCCs in 2012 appears to be driven by Tiger Airways closing a number of its domestic routes.

Figure 4.3 Route churn rates at Australian airports: FSCs vs. LCCs (2011–2017)



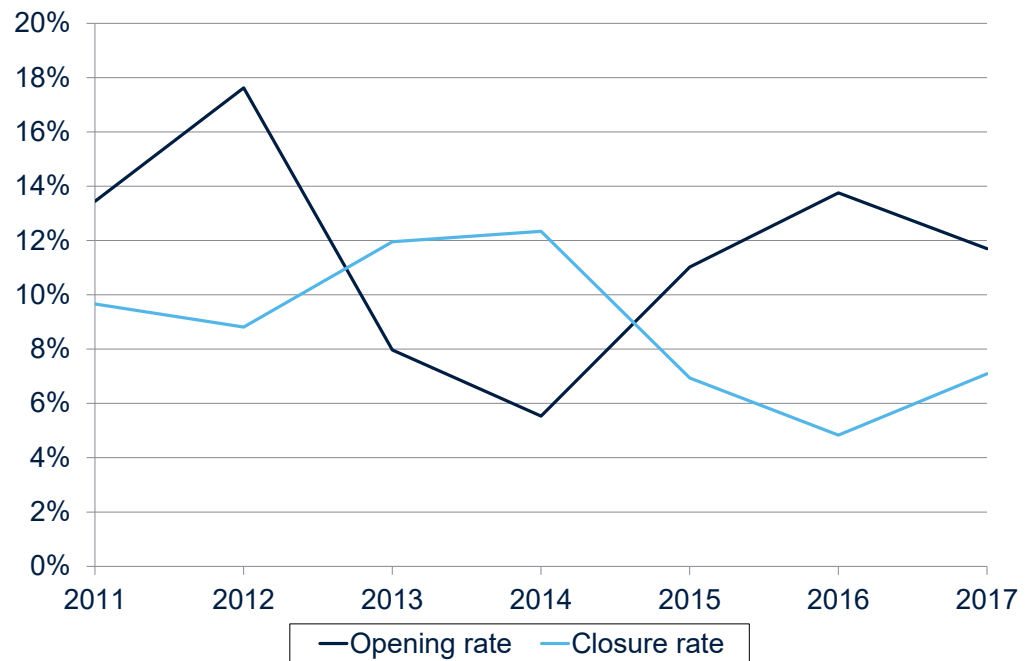
Note: Analysis excludes flights to or from airports with less than 1,000 ATMs per annum. A route is defined as one service from a unique origin airport to a unique destination airport by a given airline (for instance, if two distinct airlines operated in both directions between Brisbane and Sydney, four routes would be identified). Opening (closure) rates calculated as the number of routes that (do not) operate in a year that did (not) operate in the year before, divided by the total number of routes in operation in that year.

Source: Oxera analysis of IATA data.

4.3.5 Route churn at Brisbane Airport

Figure 4.4 illustrates the route churn rates for Brisbane Airport. Typically, anywhere between around 15 to 45 routes are opened in a given year, while between 15 and 30 are closed.

Figure 4.4 Route churn rates at Brisbane Airport, 2011–2017



Note: Analysis excludes flights to or from airports with less than 1,000 ATMs per annum. A route is defined as one service from a unique origin airport to a unique destination airport by a given airline (for instance, if two distinct airlines operated in both directions between Brisbane and Sydney, four routes would be identified). Opening (closure) rates calculated as the number of routes that (do not) operate in a year that did (not) operate in the year before, divided by the total number of routes in operation in that year.

Source: Oxera analysis of IATA data.

The route churn analysis above only takes account of routes opening or closing, rather than increases or reductions in frequency. However, an airline may simply reduce frequency at one airport and move these frequencies to another airport without opening or closing the route altogether. These shifts in airline capacity are more difficult to determine from the data, but this appears to be the case when Qantas started operating at Gold Coast Airport. Qantas started operating from the Gold Coast in 2012 and started a route to Melbourne in 2015. The increase in the number of ATMs from Gold Coast to Melbourne between 2015 and 2017 is likely to have contributed to a reduction in ATMs and seats operated from Brisbane, after a number of years of continuous growth in this route.

4.4 Conclusion

The existence of marketing and business development teams and the prevalence of financial incentives to attract new airlines and growth are consistent with airports competing with each other in order to win and retain the services of airlines. At some airports, particular airlines hold a large degree of influence due to both comprising a significant degree of an airport's total traffic, and the fact that even a relatively small loss of capacity can have negative financial consequences for an airport. As a result, airports expend a significant degree of effort in demonstrating the commercial case for airlines to operate routes from their airports, and find that they are often required to provide incentives to airlines.

We find evidence of routes consistently being ‘churned’ in both the overall Australian market and at Brisbane specifically, demonstrating that airlines can and do relocate capacity. It is important to note that while only actual route openings and closures can be observed objectively, simply having a credible threat to relocate capacity may be sufficient for an airline to exert a significant degree of buyer power at an airport.

5 Competition for passengers

Airports compete for passengers in a number of ways, which in turn can also influence competition between airports for airlines.

- Where two or more airports serve a particular catchment area, passengers may switch between these airports based on their respective price/service offerings.
- Airports may compete for leisure passengers who do not have particular destinations in mind, but who are seeking ‘beach holidays’ or ‘city breaks’.
- Airports may compete beyond their local catchment areas for passengers transferring between flights.

These forms of competition are considered below, and the key ways in which these forms of competition affect Brisbane Airport are set out in Box 5.1.

Box 5.1 Key messages

- There are four airports within 200km or around two hours from Brisbane Airport, including the Gold Coast airport (6.5mppa) and the Sunshine Coast Airport (1.1mppa). A number of passengers from Brisbane’s catchment area have used these airports instead of Brisbane Airport to make their journeys (and vice versa) for reasons including price and frequency. There was at least one alternative service available within 200km for 69% of departures from Brisbane in 2017. For Sydney and Melbourne airports the corresponding figures were 45% and 52%. For Adelaide and Perth, there were no competing services within 200km for any departures from those airports.
- The degree of route overlap may not be relevant for all passengers as some passengers may consider that different destinations and even some short- and long-haul flights are substitutes for one another. This is more likely to be the case for leisure passengers, who make up over 50% of Brisbane’s passengers.
- Transfer passengers, who account for 8% of Brisbane’s passengers, also have a number of alternative options in terms of the airport that they can use as a transfer point between their origin and final destination. Therefore, Brisbane Airport may compete with airports that are further afield for these passengers.

5.1 Competition for passengers in the local area

5.1.1 Catchment area analysis

In assessing whether there is competition between airports, a key question is whether there are other airports within an airport’s catchment area (i.e. in close geographic proximity) that are equivalent in terms of infrastructure and facilities, and therefore whether there is competition from nearby airports. This would allow O&D passengers to choose between airports, putting the airports in competition with one another for local passengers or passengers seeking to travel to that particular destination.

Catchment area analysis is frequently used to determine the geographic area to and/or from which an airport’s passengers travel. The size of the catchment area and the extent of overlap of catchment areas between airports can then be used as part of an assessment of the extent of competition between airports, since passengers in these overlapping areas are more likely to view the airports as reasonable substitutes.

There are no clear-cut thresholds for distance or travel time, so a number of thresholds have been tested in different cases. Analysis undertaken for Australian airports has used 120km to approximate a travel time of 1.5–2 hours.⁵⁴ We note that Auckland Airport considers its catchment area to be within three hours' and four hours' drive time.⁵⁵ A previous report has also suggested quite a wide catchment area for Melbourne Airport, noting that:

Melbourne Airport's principal customer catchment area for passengers and freight includes the state of Victoria, southern NSW from Wagga Wagga to Broken Hill, eastern South Australia to Adelaide, and all of Tasmania. This broad catchment area reflects the strong regional domestic hub status of the airport, and the continuing role of Melbourne as an international gateway.⁵⁶

In previous cases, the European Commission has used a catchment area of 100km around regional airports and 300km for international airports,⁵⁷ or a 60-minute drive time.⁵⁸ However, the Commission ultimately defines the catchment area on a case-by-case basis. The UK Civil Aviation Authority used 60-, 90- and 120-minute drive times in its significant market power assessments for Gatwick, Stansted and Heathrow airports.⁵⁹ Various public domain reports have cited a catchment area based on distances ranging from 200–250km with reference to Canadian airports.⁶⁰

Passengers may vary in their willingness to travel to their origin airport. For instance, passengers going on holiday may be more price-sensitive, and therefore willing to travel further distances to an origin airport, whereas business passengers may be more time-sensitive, and therefore likely to travel to the closest airport regardless of the price differential. Preferences for travel time may also differ according to the flight distance (e.g. long-haul passengers willing to travel longer distances to an airport) and whether they are national or foreign residents (e.g. national residents willing to travel longer distances).⁶¹ Therefore the appropriate catchment area may differ depending on the type of passengers at the airport.

Using a catchment area based on distance (e.g. kilometres or miles) is likely to be less appropriate than a catchment area based on drive time, as, for example, driving 100km in a mountainous area can take much longer than driving 100km in a well-connected area.

When assessing the relevant catchment area, the accessibility to the airport, such as by roads and railways, also needs to be taken into account. For example, if the airport is served by a rail network, passengers might be willing to travel from a further distance if this takes relatively less time than travelling the same distance by car. Therefore, it is more appropriate to use actual

⁵⁴ Lim, P.P. and Gargett, D. (undated), 'Air Transport Services in Regional Australia – Trends and Access', Bureau of Transport and Regional Economics, 30th Australasian Transport Research Forum.

⁵⁵ See: <https://www.aucklandairport.co.nz/-/media/Files/.../FastFactsandFiguresFlyer.ashx>, accessed 13 August.

⁵⁶ Melbourne Airport – Industry Commission Inquiry: International Air Services, March 1998, p.1.

⁵⁷ European Commission (2005), 'Commission Decision of 08.08.2005 referring case No COMP/M.3823 – MAG/Ferrovial Aeropuertos/Exeter Airport to the competent authorities of the United Kingdom pursuant to Article 9 of Regulation (EC) No 139/2004', C(2005)3144, 8 August, para. 18.

⁵⁸ European Commission (2013), 'Case No COMP/M.6663 – RYANAIR/ AER LINGUS III, Regulation (EC) No 139/2004 Merger Procedure', C(2013) 1106 final, 27 February, para. 80.

⁵⁹ Civil Aviation Authority (2012), 'Heathrow: Market Power Assessment - Non-confidential Version', The CAA's Initial Views, February.

⁶⁰ See, for example, Transport Canada (2004), 'Regional and Small Airports Study' (TP 14283B) in Postorino, M. N. (ed.) (2010), *Development of regional airports*, WIT Press, p. 82; Council of Ministers Responsible for Transportation and Highway Safety (2006), 'Report of the air issues task force on small airport viability', September, section 5.2.5.

⁶¹ European Commission (2006), 'Case No Comp/M.4164 – Ferrovial/Quebec/GIC/BAA

access times rather than fixed distances to define the catchment area where possible, to ensure different ways of accessing the airport are accounted for.

In Table 5.1, we set out the drive times and distances between Brisbane Airport and airports that are within 300km. We present the distances in kilometres, as well as the time it would take to drive between the airports. This indicates that there are four airports within 200km or around two hours from Brisbane Airport. The Gold Coast Airport is the largest, with nearly 6.5mppa in 2017, while the second largest is Sunshine Coast Airport, with 1.1mppa in 2017. The other airports are relatively small compared to Brisbane Airport.

Table 5.1 Drive times and distances from Brisbane Airport

Airport	BNE		
	Distance (km)	Approx drive time (mins)	Passenger numbers (2017)
Sunshine Coast Airport	109	80	1,126,684
Gold Coast Airport	108	75	6,479,083
Brisbane West (Toowoomba) Wellcamp Airport	154	120	142,967
Ballina Byron Gateway Airport	196	130	509,579
Hervey Bay Airport	293	200	173,380

Source: Distance and drive times based on google maps, assuming no congestion but including roads with tolls. Passenger numbers based on Australian Government Department of Infrastructure, Regional Development and Cities, 'Airport traffic data', June 2018. This includes revenue passengers.

Note: Based on airports with at least 1,000 ATMs in 2017. We note that the table above is based on drive time and does not take account of travel by rail (for example the Airtrain).

In addition to considering fixed distances between airports, it is relevant to consider the 'outturn' catchment area—i.e. data on the actual origin and/or destination of passengers using the airport—in order to determine the appropriate catchment area. Indeed, it is important to take account of the drive time from the perspective of customers, as well as the drive time between the airports themselves. For example, two airports may be located 100 minutes away from one another. However, if the majority of customers live between the airports, they are likely to be less than one hour's drive time from each airport.

In 2016 Brisbane Airport commissioned a survey of the main factors that drive the choice of airport for international travellers living in the BNE catchment area.⁶² This survey indicated that approximately 25% of respondents used an airport other than BNE for their international travel in the last 18 months.⁶³ The majority of individuals that used other airports to BNE used Sydney Airport (63%) while 15% used Gold Coast, 14% Melbourne, 4% Cairns and 4% Perth.⁶⁴ These passengers chose to use other airports for different reasons. The top five reasons cited were: there were no flights to the destination from BNE; cheaper flights; flights on preferred date; airline preference; and aircraft.

While individuals using some of these airports are still likely to have used Brisbane to take a connecting flight, the passengers using the Gold Coast Airport are likely to have chosen this airport instead of using Brisbane

⁶² Red Planet (2016), 'Airport Choice: Study of the main factors influencing flight and airport choice', 6 April. As respondents may have used more than one alternative airport, these may not sum to 100%.

⁶³ 44% of respondents travelled only from BNE and 28% had not travelled internationally in the last 18 months.

⁶⁴ Ibid. p.5.

altogether for their journey. The results also indicate that BNE faces strong competition from the Gold Coast Airport in terms of price.

We note that this analysis only focuses on international passengers, but we would expect domestic travellers at BNE to also have used other airports in the past due to the higher number of Australian airports offering domestic services.

When considering the survey data another way, only 48% of passengers who used BNE in the last 18 months lived in Brisbane; 20% lived in Gold Coast/North New South Wales, 17% along the Eastern Coastline, 9% in Cairns and 3% in the West.⁶⁵ At the same time, 42% of travellers from the Gold Coast and Northern New South Wales stated that they used their local airport for international travel. This indicates that Brisbane is competing with other airports in these regions (e.g. Gold Coast Airport) to attract these passengers.

Indeed, Tourism Research Australia's International Visitor Survey indicates that a large proportion of travellers use Brisbane Airport to access the Gold Coast. There are several transport options for passengers to travel between the airport and the Gold Coast, including the Airtrain and buses.

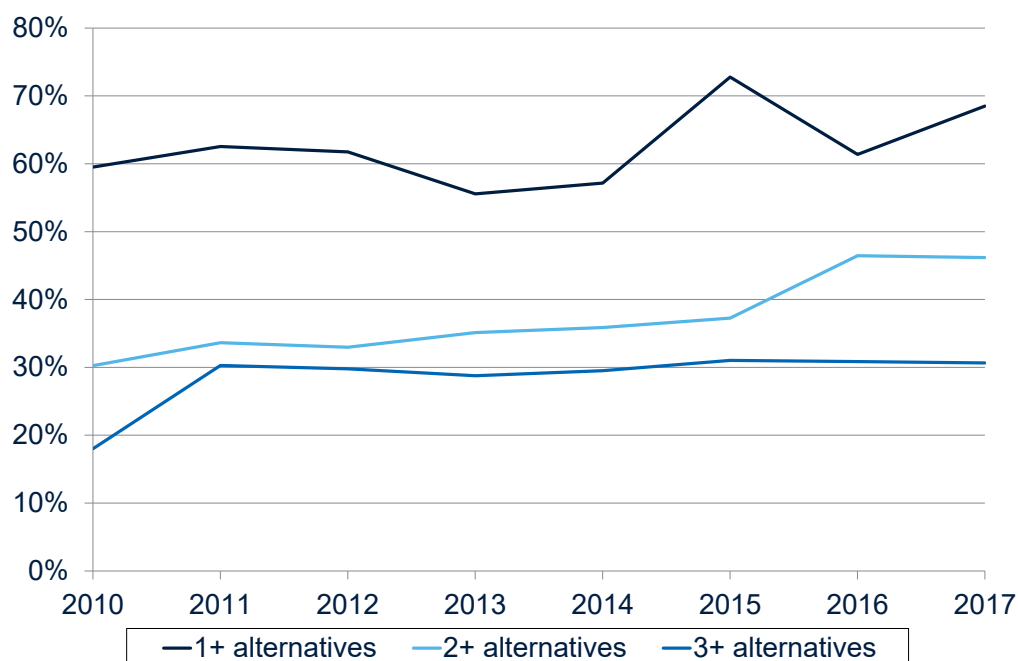
5.1.2 Proportion of competing routes

Passengers will consider a number of elements other than travel time and distance in deciding where to fly from, including cost, flight schedules and quality of service of the airport. Therefore, services at airports may be differentiated in a way that limits competition between them, even if they are geographically close. For this reason, it can be important to consider the degree of route overlaps between nearby airports to determine if, in addition to passengers being willing to switch, passengers are actually able to switch between airports.

For certain groups of passengers, particularly VFR and business passengers, this may mean that the destination, or the destination airport, needs to be available at the alternative airport. When Brisbane and one (or more) alternative airports to which these passengers would be willing to travel offers services to that destination, they may compete with one another. Figure 5.1 shows the share of departing routes from Brisbane where there is also a service available from at least one or more airports located within 200km. This is shown on the basis of how often Brisbane has 'at least' a given number of competitors. For instance, on a route where Brisbane faces two competing services, this would be captured within both the '1+' and '2+' alternatives categories.

⁶⁵ Red Planet (2016), 'Airport Choice: Study of the main factors influencing flight and airport choice', 6 April, p. 8.

Figure 5.1 Proportion of flights departing from Brisbane Airport with alternative departure airports available within 200km



Note: Analysis excludes flights to or from airports with less than 1,000 ATMs per annum, or on routes with less than 10 flights per year.

Source: Oxera analysis of IATA data.

Based on this metric, Brisbane Airport faced competition for a higher proportion of its traffic than most other medium and large airports in Australia. There was at least one alternative service available within 200km for 69% of departures from Brisbane in 2017, while at Sydney and Melbourne airports the corresponding figures were 44% and 52%. For Adelaide and Perth, there were no competing services within 200km for any departures from those airports.

However, it is also important to consider the comparability of a service offered from a nearby airport. For instance, if a given destination is served daily by one airport, but only on a weekly basis by a nearby airport, then the alternative airport may be considerably less attractive to passengers, and thus may only pose a weak constraint. Table 5.2 shows the impact of introducing a requirement that a competing route must have a frequency of at least a certain percentage of that offered by Brisbane Airport.

Table 5.2 Share of routes where BNE faced competition from an alternative within 200km, 2017

	Minimum frequency of competitors, as a share of BNE's			
	5%	10%	20%	30%
At least one competitor	68%	52%	43%	36%
At least two competitors	34%	34%	0%	0%
At least three competitors	18%	18%	0%	0%

Note: Analysis excludes flights to or from airports with less than 1,000 ATMs per annum, or on routes with less than 10 flights per year. Frequency of competitor requirement is based on the total number of annual flights to a given destination from a potential competitor as a share of the total number of annual flights to the same destination from Brisbane Airport.

Source: Oxera analysis of IATA data.

This suggests that while there are a number of potential alternative options to Brisbane Airport, the frequencies offered by alternative airports are typically lower. While this may mean that the competitive constraint exercised by these airports on Brisbane is not as strong as it would be if their frequencies were higher, it is possible that the frequency of these routes could be increased to capture extra demand if Brisbane degrades its offering to passengers.

While the above analysis is useful, it is important to note (as set out in section 4) that airports may compete ‘for the market’—i.e. to get the airline to operate the route from the airport in the first place—in addition to competing ‘in the market’ on particular routes. Therefore, the absence of route overlaps between two airports does not indicate that they are not in competition with one another.

In addition, the degree of route overlap may not be relevant for all passengers as some passengers may consider that different destinations and even some short- and long-haul flights are substitutes for one another. This is likely to depend, in part, on the purpose of travel. Therefore, in addition to the catchment area analysis, which determines competition from nearby airports, it is also important to consider the overlap with airports further afield for particular passenger segments. This is explored in further detail in the following sections.

5.2 Competition for leisure passengers

In addition to passengers considering airports within a given catchment area, there may be a number of passengers who are willing to substitute between airports that are not in the same catchment area, as these passengers are simply seeking a ‘beach holiday’ or a ‘weekend break’. This is most likely to apply to leisure passengers, as passengers on business or VFR are more likely to want to travel to a particular city or to airports near their ultimate destination. Leisure passengers are also likely to be the most price-sensitive travellers and therefore may be willing to travel to a different airport for a cheaper fare, or could choose not to travel altogether.⁶⁶

This is not about such passengers being more prone to making last-minute decisions (although they may be), but about their willingness at any point in their decision making to consider a variety of destinations. Therefore, if there is a significant proportion of inbound leisure passengers at the airport, this may act as a competitive constraint on the airport.

Brisbane Airport’s 2016 survey of passengers using BNE indicates that over 51% of passengers using BNE travelled for holidays,⁶⁷ 23% were visiting friends and relatives, and 19% were travelling for business.⁶⁸

As noted by the Productivity Commission, some airports might compete with airports in other destinations to attract passengers and airlines—for example, high airport charges or poor service quality might influence whether tourists choose an alternative destination that offers similar attractions.⁶⁹

5.3 Connecting passengers

Another segment of passengers for which Brisbane Airport faces competition is transfer passengers. Transfer passengers comprised approximately 8% of

⁶⁶ The Schiphol market power assessment cites González-Savignat (2004) as evidence that leisure passengers are more price-sensitive. The European Commission also notes this in its merger procedure Reg (EC) no 139/2004 Iberia-BA report.

⁶⁷ Red Planet (2016), ‘Airport Choice: Study of the main factors influencing flight and airport choice’, 6 April, p. 12.

⁶⁸ There were also 7% other.

⁶⁹ Productivity Commission (2018), ‘Economic Regulation of Airports’, Issues Paper, July, p.5.

Brisbane Airport's passengers in 2017, and they can be split between those using Brisbane as a transfer point between two domestic flights, a domestic and international flight, or two international flights. Table 5.3 shows that the majority of Brisbane Airport's connecting passengers are making a connection between two domestic flights.

Table 5.3 Breakdown of connecting passengers at Brisbane Airport (2017)

Type	Passengers (m)	Share of all Brisbane Airport passengers (%)
Domestic–domestic	1.1	5.0
Domestic–international	0.6	2.5
International–international	0.1	0.5
Total	1.9	8.1

Source: Oxera analysis of IATA and BITRE data.

Brisbane Airport may face competition for these passengers in a number of different ways.

- In some cases, a direct flight may be available. For instance, of the five most popular domestic-to-international connections made via Brisbane in 2018, direct flights are available for four.⁷⁰
- In other cases, it may be possible to connect via an alternative hub.

Table 5.4 assesses the degree of competition faced by Brisbane Airport for the top ten connecting passenger flows that it serves. These are all domestic–domestic connections. For six of the top ten flows served by Brisbane Airport, a credible alternative is available. While one of these alternatives (Townsville to Perth via Sydney) only achieves very small uptake, four of the six alternatives are in fact more popular than the 'via Brisbane' option.

Table 5.4 Analysis of competition on popular connecting passenger flows at Brisbane (2017)

Route	Passengers	Alternatives	Brisbane transfer share (%)
Townsville to Sydney	71,434	Direct, or via Melbourne	37
Townsville to Melbourne	53,152	Direct, or via Sydney	30
Mackay to Sydney	48,535		100
Mackay to Melbourne	41,726		100
Rockhampton to Sydney	38,930		100
Cairns to Sydney	38,874	Direct, or via Melbourne	4
Rockhampton to Melbourne	34,431		100
Townsville to Perth	28,095	via Sydney	95
Cairns to Melbourne	27,993	Direct, or via Sydney	4
Townsville to Adelaide	24,815*	via Sydney or Melbourne	76

Notes: * Includes approximately 300 passengers who make this journey stopping at both Brisbane and Sydney.

⁷⁰ No direct flight is available for the most popular connection, from Melbourne to Port Moresby; however, direct flights are available for the routes between Cairns and Auckland; Sydney and Denpasar; Sydney and Port Moresby; and Melbourne and Denpasar.

Source: Oxera analysis of IATA data.

This suggests that Brisbane faces competitive pressure for a significant proportion of its transfer passengers.

5.4 **Conclusion**

This section has considered the ways in which Brisbane Airport competes with other airports for passengers. In particular, we note that survey evidence suggests that a significant proportion of Brisbane's passengers have flown (or have considered flying) from other airports. There are multiple other airports within a reasonable distance of Brisbane—in particular, Gold Coast Airport, which draws a significant number of passengers from the Brisbane area (as does Brisbane Airport from the Gold Coast area).

We have also undertaken quantitative analysis of the extent to which particular destinations can be reached from other airports within 200km of Brisbane. While other airports offer alternatives to Brisbane Airport on a number of routes, these airports do not typically offer the same frequency as Brisbane. Nonetheless, these airports still exert some degree of competitive constraint on Brisbane Airport, and they may be able to increase the extent of competitive constraint if they were to increase frequency of these flights.

Furthermore, given that over half of the passengers flying to or from Brisbane state that holiday is their reason for travel, it may not be necessary for an alternative airport to offer a flight to the same destination as Brisbane, given that many holidaymakers may simply be in search of (for instance) a city weekend break, or a beach holiday. Transfer passengers at the airport also have a number of alternative options in terms of the airport that they can use as a transfer point between their origin and final destination.

6 Conclusion

The analysis set out in this report has provided evidence that Brisbane Airport faces competition for a significant proportion of its passengers and airline traffic. It competes with airports located nearby in South East Queensland as well as with airports further afield, including Melbourne, Sydney, and, in some cases, potentially even international airports.

There may be certain groups of passengers for which Brisbane Airport is the primary, or only, choice of airport. For example, this could be the case for passengers located in the immediate vicinity of the airport, or passengers who are seeking to fly to particular destinations that are not offered by nearby airports. However, as long as there are a sufficient number of passengers that could switch to alternative airports, and/or airlines that could significantly reduce or switch their operations away from the airport in response to a price rise (or reduction in service quality), this should be sufficient to constrain the airport's behaviour.

Brisbane Airport's airline customer base is highly concentrated, with Qantas, Virgin, Jetstar and Tiger accounting for 79% of traffic. While these airlines account for a large percentage of capacity at the airport, a smaller proportion of these airlines' traffic is located at Brisbane Airport, making it easier for them to (credibly threaten to) switch services to alternative airports. Furthermore, if these airlines were to reduce their operations at the airport rather than remove them altogether, they would still be likely to have a significant impact on the airport, and any switching costs to the airlines would be lower.

The Productivity Commission's review is considering whether the current degree of economic regulation at the airport is fit for purpose. Economic regulation is applied where there is a concern about the potential for firms to abuse their dominant market positions due to a lack of effective competition. Authorities may be concerned that these firms could cause harm to customers through, for example, higher prices, poor service quality, or lack of investment. Economic regulation is therefore introduced to try, to the extent possible, to replicate the outcomes that would arise in the market if there was effective competition.

Competition should be considered first as the most efficient and effective way of delivering benefits for consumers. Where competition is not possible or has not developed sufficiently, regulation should only be implemented where it is a cost-effective alternative that takes account of the extent of competition and likely future developments in the market, taking care to avoid compromising the growth of competition.

Our review has determined that Brisbane Airport faces competition for a significant proportion of its passenger and airline traffic, and that airlines at the airport have a degree of countervailing buyer power. We expect the trends that have contributed to this competitive environment to continue, and therefore we expect there to be similar constraints on the airport going forward. As a result, a light-handed form of regulation, such as the form currently applied at the airport, is likely to be the most appropriate regime consistent with the degree of competition at the airport.

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