



Civil Aviation Authority

Heathrow: Market Power Assessment Non-confidential Version

The CAA's Initial Views - February 2012

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Executive Summary – Heathrow

Rationale and context for the CAA's airport market power assessments

1. Where airports enjoy high levels of market power, it can be appropriate for the CAA to apply economic regulation, so as to improve outcomes for passengers, cargo shippers and airlines.
2. The CAA is committed to ensuring that its regulation of airports promotes choice and value for consumers, whilst also meeting the better regulation principles. In order to deliver on this commitment, during 2011 the CAA embarked upon a project to understand the extent and nature of market power held by the airports that are currently 'designated' for price control regulation: Heathrow, Gatwick and Stansted.
3. This document sets out our work to date to understand the market power held by Heathrow. These views are based on the evidence currently available to the CAA. As noted above, we expect that additional evidence will become available before the CAA takes a firm view on the position of each airport. Reflecting this, there are a number of issues that have been left open and, whilst the CAA has sought to highlight where the airport might sit on the market power spectrum, it has not reached a definitive view at this stage.
4. We would like to thank those stakeholders who have engaged with the CAA during 2011, and invested time and money in providing evidence and analysis.

Market definition

5. A first step in assessing the airport's market power is to consider the market(s) in which Heathrow operates with regard to its various user groups to establish a frame of reference within which to conduct the analysis.
6. The airport provides infrastructure and infrastructure services to its various groups of users, including passenger airlines, passengers, and cargo carriers, and also retailers and car park operators. Each of these user groups could be considered as different 'sides' of the airport market; each with its own characteristics and ability to respond to changes in the price and service offered by Heathrow.¹
7. In order to understand the market position of Heathrow, it is important first to consider the characteristics of the airport's users, including the choices available to them to reduce their use of the airport. As a next step, the interactions and interdependences between the choices made by these different airport user groups need to be analysed to reach a view on their combined impact on the airport.

¹ This treatment of airports as operating in a multi-sided market is described in more detail in the CAA's *Guidance on assessing airport market power*.
<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

Provision of services to passenger airlines

8. Heathrow is the UK's only major hub airport, carrying sixty-six million passengers in 2010 of which thirty-five per cent connected through the airport to another flight. Reflecting this, Heathrow focuses on the provision of a range of aeronautical and non-aeronautical infrastructure and infrastructure services to two broad types of airlines. First, there are a small number of airlines which are based at the airport – notably BA, BMI and Virgin – who operate networks into and out of Heathrow, or rely on the networks operated by other carriers. These airlines ('based network carriers') account for approximately 50 per cent of passengers and 53 per cent of movements at the airport.
9. Second, there are a larger number of airlines who base their operations away from Heathrow, often linking Heathrow to one of their own hub airports, thereby providing connecting passenger feeder traffic into their other services. For example, Lufthansa operates a number of services from Heathrow into its German hubs, whilst American Airlines flies to a number of major US cities including its largest hub, Chicago. Overall, inbound carriers account for 50 per cent of passengers and 47 per cent of movements at Heathrow. Both of these airline business models tend to rely significantly on the ability of passenger to connect between flights at Heathrow. In addition, the majority of the airlines at Heathrow are members of one of the three major airline alliances (oneworld, Star Alliance and Sky Team).
10. Heathrow provides infrastructure and infrastructure services for the operation of passenger services, including facilities for the landing, parking and taking off of aircraft. Both based and inbound airlines at Heathrow tend to have particular requirements from the airport, including the ability to connect passengers and their baggage between aircraft and process cargo carried in the hold of passenger flights. Heathrow also provides other ancillary services.
11. Although the majority of airlines operating at Heathrow require a similar (and relatively broad) range of infrastructure and infrastructure services, there are important differences between based and inbound carriers that affect the extent of the geographic market(s).

Based network airlines

12. Airlines that base their network at Heathrow are likely to face a limited set of substitutes. This is due to a number of factors, including the nature of network economics and the tendency for the carriers at Heathrow to focus their operations at a single airport, rather than maintaining multiple, large network bases across several airports. Network airline business models also rely on the operation of both short-haul and long-haul routes, which means that the relocation of one route will not only affect its individual profitability, but also has the potential to affect the profitability of the entire operation. This impact of individual services on the wider network represents an additional barrier against these airlines moving some services away from Heathrow, and is likely to limit the number of airports that airlines view as reasonable alternatives.

13. Further, these carriers have undertaken substantial investment involved in developing Heathrow as a network base which are likely to mean that there are no close alternatives to which to switch their entire operation, particularly in a timescale needed to support these other airports being included within the same economic market. In addition, given the particularities of its route network and the low availability of airports with sufficient capacity and infrastructure to accommodate the network, the market is likely to be defined particularly narrowly. As a result, Heathrow appears to operating within a narrow geographic market with regard to these airlines, which is no wider than Heathrow and, for some services, Gatwick.

Inbound airlines

14. Inbound carriers, operating both short- and long-haul services into Heathrow from their respective hub airports, are likely to face a larger choice set of substitute airports than based network airlines. They are likely to have more ways to redeploy their aircraft away from Heathrow whilst avoiding a large adverse impact on their networks. For example, a service operating between Heathrow and their network hub can be redeployed on a number of alternative services out of that hub. The alternative service might be expected to deliver similar (if, on average, not as significant) network benefits to the airline. Whilst the switching costs may still be significant, they appear likely to be materially lower than those experienced by based carriers at Heathrow, by virtue of the impact of network effects on switching costs and the considerably lower infrastructure investment undertaken by inbound carriers. Indeed, short-haul inbound airlines are likely to be able to switch services to other airports in Europe, while long-haul inbound airlines are likely to be able to switch to airports further afield.
15. Heathrow is then likely to be providing infrastructure and infrastructure services to passenger airlines in three overlapping geographic markets. For based carriers, the geographic market is no wider than Heathrow and, for some services, Gatwick. With regard to inbound carriers operating short-haul flights, Heathrow is likely to be competing with airports in a geographic market extending to Europe, while this market may extend further afield when considering long-haul inbound airlines.

Provision of services to passengers

16. Heathrow provides a range of aeronautical and non-aeronautical services, including central search facilities and near-airport car park facilities, to two different types of passengers. First, surface passengers originate from Heathrow's catchment area and travel to the airport by surface access transport, such as road and rail. In 2010, these accounted for approximately 42 million (65 per cent) of Heathrow's total passengers. Second, connecting passengers fly into Heathrow to connect to their onward destination by air. These passengers represent approximately 23.5 million (35 per cent) of Heathrow total passengers in 2010. Due to their characteristics, surface and connecting passengers face different choice sets.

Surface passengers

17. Heathrow appears to be competing for surface passengers (those travelling to the airport using surface access) over a relatively broad geographic area, including the South East and Greater London regions and extending towards the west and north, particularly when attracting passengers to long-haul services. Consequently, there are very significant overlaps in the airport's catchment area with Gatwick, Stansted and Luton (as well as other smaller airports), although many passengers appear to have a strong preference for using services at Heathrow. It may also be relevant to consider the constraints imposed separately by passengers on short- and long-haul flights, and by journey purpose, the market definition in this regard can be left open.

Connecting passengers

18. Heathrow is competing for connecting passengers (those flying into Heathrow to connect to another service) in a market with the other major hub airports in Europe, including Amsterdam Schiphol, Frankfurt am Main, and Paris Charles de Gaulle. However, the airport also faces competition from hubs located further afield on certain routes.
19. Heathrow is then likely to be providing infrastructure and infrastructure services to passengers in two distinct geographic markets. For surface passengers, the geographic market appears to include a relatively broad geographic area covering the south east of England, extending to the north and west particularly when attracting long-haul carriers. For connecting passengers, the relevant geographic market in which Heathrow competes is likely to include the other major hub airports in Europe.

Provision of access to Heathrow infrastructure to third party service providers

20. Many services for airport users are provided by third party service providers. For airlines and cargo carriers, these service providers (contracted by them) include ground- and cargo-handlers respectively, and maintenance and repair operations. For passengers, these service providers include food and drink, and providers of other retail services (e.g. bureau de change). In order to provide these services, suppliers typically need to rent terminal space and to obtain access to the landside and airside facilities for their staff and to bring in stock. However it does not appear necessary to identify a separate market for access to the airport's infrastructure. Instead, this has been treated as an important aspect of the product supplied to airlines and passengers.

Summary: market definition

21. Focusing on the relevant markets with regard to passenger airlines and passengers, Heathrow operates in relatively broad markets to attract passengers, but in a much narrower market when competing for its based passenger airlines. Although the relevant markets defined for passengers and some groups of airlines may appear quite broad, it is the interaction at the airport of the passenger-facing and airline-facing markets that affects the

competitive constraints faced by the airport and affects the profitability of a price increase. In this respect, the very significant switching costs faced by the airlines based at Heathrow appear likely to reduce significantly the competitive pressure that might arise from the choices available, in principle, to passengers.

Market shares

22. Market share analysis, which can provide an initial indication of Heathrow's position in different markets relative to its competitors, suggests that Heathrow enjoys a relatively strong and stable position when measured at an aggregate level, even when viewed on a UK-wide basis. However, the airport's position varies considerably regarding different types of passenger airlines and passengers, which provides evidence on the strength of the potential sources of competitive constraints arising from different groups of airport users. The market share data are, however, considered with all other relevant evidence on competitive constraints before reaching a view concerning the strength of the airport's market power.

Long-haul services carrying surface passengers

23. The market share analysis for long-haul airlines and surface passengers highlights that whilst airlines may be able and willing to switch to use alternative airports across potentially a wide geographic area, Heathrow is by far the largest UK airport and currently has a very substantial share of passengers on long-haul services overall, including 78 per cent across London airports, with a particular strength in routes serving business and VFR passengers.

Short-haul services carrying surface passengers

24. Compared to its European competitors, Heathrow does not have a particularly large share of Air Transport Movements (ATMs), while the airport's share of short-haul passengers is in marked contrast to its very strong position in long-haul markets. Indeed, Gatwick (32 per cent), Heathrow (28 per cent) and Stansted (25 per cent) have similar shares in the London short-haul market. However, Heathrow's position in short-haul markets is strengthened by the interactions between long-haul services and short-haul services operated by network-focused airlines, as the removal of these short-haul services could have significant implications for airline network profitability.

Short/long-haul services carrying connecting passengers

25. Whilst an approximation, the share of Air Transport Movements operated by airline alliance members at Heathrow and Gatwick can give an indication of the airports' relative positions in terms of major airline networks. In 2010, airlines that are alliance members accounted for 75 per cent of Heathrow's Air Transport Movements (ATM), while only representing around 20 per cent at Gatwick. This suggests that Heathrow has a very strong position relative to other London airports regarding the handling of connecting passengers. By contrast, Heathrow has a significant – but approximately equivalent – share

of connecting passengers relative to other major European hubs, which does not, in itself, suggest a particularly strong market position for connecting passengers.

26. Overall, the degree of market power enjoyed by the airport in markets for connecting traffic appears most likely to arise from the relatively limited options available to the airlines at Heathrow that fly connecting passengers, from the linkages between connecting passengers and the very strong position that the airport enjoys in long-haul markets, rather than arising by virtue of Heathrow's size in this market.

Competitive constraints from the interdependence of airlines and passengers

27. While market shares provide evidence that Heathrow appears to enjoy a position of varying strength across various market segments, evidence on the degree to which different passengers and airlines are able to switch away from Heathrow, and the impact that such switching would have on the profitability of the airport, needs to be considered to analyse the strength of the airport's market power.

Based carriers

28. Based carriers at Heathrow face very high switching costs due to the nature of their operations, in particular the impact that switching services would likely have on route and overall network profitability. These impacts arise from the connecting passenger feeds and higher cargo and passenger yields available at Heathrow. They are, therefore, very unlikely to be able to respond effectively to an increase in airport charges by switching away from Heathrow, and so would not constitute marginal consumers for the airport. Due to the difficulties faced by airlines switching away from Heathrow, any constraints on Heathrow's pricing to these airlines would have to come from a sufficiently strong response by the airlines' connecting and/or surface passengers.
29. Surface short-haul passengers face a wide choice set of alternative airports, whilst surface long-haul passengers at Heathrow face a more limited choice set in the south east of England, limiting their ability to switch between different airports. However, the survey evidence shows that only Gatwick is frequently stated as an alternative airport by both short- and long-haul surface passenger and, further, that surface short-haul passengers at Heathrow are overall the least price responsive.
30. Whilst certain types of surface holiday and VFR passengers might constitute the marginal passengers for Heathrow, it is not certain that a significant proportion of them would in fact switch away. Further, the need for VFR passengers to reach a particular destination might mean that the only viable alternatives are to fly on a connecting route. It is also likely that airline loyalty schemes could constitute an additional barrier to passenger switching. Overall, it appears unlikely that switching by surface passengers at Heathrow would discipline the airport in increasing its prices to based airlines, which are somewhat captive at the airport.

31. By contrast, connecting passengers appear to be more responsive to changes in the cost of using the airport and perhaps more likely to discipline the airport's pricing. However, survey evidence reveals that the majority of Heathrow connecting passengers would still prefer to connect through the airport. Further, although Heathrow faces competition from other European hub airports for connecting passengers, it is not clear that the level of switching would be sufficient to substantially constrain the airport's pricing to based airlines. Indeed, since connecting passengers and surface passengers can be carried on the same services, the strength of demand from surface passengers may well insulate the airport from the prospect that the based airlines would switch away from Heathrow in response to a fall in connecting volumes. As a result, it appears unlikely that the lost passenger volume would be sufficient to exceed the critical loss level required to make a price increase by Heathrow unprofitable.

Inbound carriers serving surface and connecting passengers

32. Unlike based carriers, inbound airlines are in principle more likely to be able to switch away from Heathrow due to lower switching costs, although the switching away of a route would be also likely to have an important impact on their network profitability.
33. Although short-haul inbound carriers might be able to switch to substitute airports across Europe and long-haul inbound carriers might be able to switch to another hub or other airport further afield, many of these carriers also depend on connecting passenger and cargo feeds, as well as benefitting from the alliance-based network effects at Heathrow.
34. Of the airlines at Heathrow, the inbound airlines carrying less than 10 per cent of connecting passengers on their services are likely to constitute the most marginal airlines at Heathrow. However, these only account for a small proportion of Heathrow's total passengers and the airlines carrying most of these passengers are also typically members of an airline alliance, which would increase their switching costs due to the (albeit more moderate) alliance-related network effects.
35. As with based carriers, it is the passengers that are likely to be more willing and able to switch away from Heathrow, with connecting passengers being probably more responsive than their surface counterparts. Given the reduced reliance of marginal airlines on connecting passengers, it is not clear whether surface passenger switching would be sufficient to constrain Heathrow's pricing towards inbound carriers, or whether these carriers account for a sufficiently large proportion of Heathrow's passengers to discipline the airport with regard to the more captive inbound carriers.

Airline buyer power

36. Airlines, in principle, can find themselves in a sufficiently strong bargaining position to constrain an airport's behaviour through their countervailing buyer power. However, while it is clear that different carriers are in a different position in terms of their buyer power – for example, inbound carriers are likely to face lower switching costs than based network carriers – it is unlikely

that the competitive pressure exerted by airlines on Heathrow can be regarded as countervailing buyer power. This is, in particular, due to the strength of demand for capacity at the airport, which means that any attempt to discipline the airport by scaling back usage will be likely to lead to expansion by a competing incumbent or new entrant airline at Heathrow.

Examples of passenger airline switching

37. In general terms, in recent years, examples of airline switching involving Heathrow have typically involved switching to Heathrow, as exemplified by the transfer of routes to the USA after the 2008 'Open Skies' agreement. The willingness to switch to, rather than from, Heathrow when this is permitted and/or possible shows the attractiveness of the airport. Indeed, where services that were once operated at Heathrow have commenced at other airports they have typically been operated by carriers who are not present at Heathrow. These recent trends in passenger airline switching serve to reinforce the evidence revealing the importance of airline networks and the impact that these networks have on the switching costs faced by the carriers at Heathrow.
38. Having considered the competitive constraints facing Heathrow from the interaction of passenger airlines and passengers, it would appear that the airport enjoys a strong market position and a considerable degree of market power. However, additional factors relating to the underlying market conditions are now considered to reach an overall initial view on the degree of Heathrow's market power.

Capacity constraints and barriers to expansion

39. Overall, the balance between demand and available capacity is a significant factor that impacts upon Heathrow's incentive to compete to attract additional airlines and routes. In addition, the relatively constrained position of Gatwick – which for many airlines is the only credible alternative to using Heathrow – means that capacity constraints limit the potential for airline switching to limit Heathrow's market power, particularly for those airlines that would need to switch a substantial volume of their business, in order to sustain network effects.

The potential for market power to evolve over time

Hub and network airline effects

40. In light of the continuing capacity constraints at Heathrow, it appears likely that incumbent based network airlines will continue to focus on deepening their networks. Further, it is possible that point-to-point short-haul routes may be "squeezed out" to other London airports with capacity. Overall, it appears that there is likely to be further consolidation by existing users at Heathrow as it becomes further oriented towards network and long-haul operations. This would tend to strengthen the market position of the airport, as it becomes increasingly focused on long-haul services, where it already has a particularly strong market position. Heathrow's position might, however, weaken if it

ceased to be a meaningful hub airport, which would reduce the relevance of airline network effects.

Lack of realistic substitutes

41. A long-term factor contributing to Heathrow's strong market position is the substantial, irreversible capital investments required to enter into the provision of hub services. A new hub airport entry, or a based network carrier moving its large existing hub operations, would be a very long process though it is not impossible. An example is the creation of a secondary hub by Lufthansa at Munich. However, such overseas entry is unlikely to threaten Heathrow's position as the only hub airport in the UK, which makes it unique and without realistic substitutes for many of its existing airlines. Further, whilst there is discussion of the potential to construct a new hub airport to the east of London, it is notable that these projects all involve considerable capital investment and lead times. Should one of these projects be pursued, it would have significant implications for the market position of Heathrow in the longer term.
42. In addition, although it competes with the other European hub airports for connecting passengers, each hub is differentiated by its location and based network carriers such that each hub appears to have developed a different geographic route focus. The lack of realistic substitutes either in the UK or further afield seems to offer Heathrow a strong market position from which it is likely to be able to enjoy substantial market power over a sustained period.

Long haul traffic

43. Heathrow appears to have strong position with regard to airlines offering long-haul routes, which are particularly concentrated at the airport. Although there are a number of airlines offering point-to-point long-haul routes at a small number of other London and UK airports, it appears that the reliance of many airlines on connecting passengers flying into Heathrow to obtain a load factor above 80 per cent, as well as the importance of bellyhold cargo to route profitability, precludes substantial relocation of long-haul operations to other UK airports. However, operators feeding non-UK hubs are growing in importance, which could have an increasing impact on hub competition.

The CAA's initial view on the degree of Heathrow's market power

44. Overall, the available evidence strongly suggests that Heathrow currently enjoys a very strong market position amounting to Substantial Market Power (SMP) with regard to its overall operations. This is primarily guided by its strong market position as a hub airport with airline network operations, a lack of viable substitutes for a considerable proportion of its airlines and passengers, and its strong position for long-haul services and passengers. However, the nature of airline economics at Heathrow means that the airport's SMP extends also to both surface and connecting passengers, short-haul services, and to the airport's operations overall.
45. Heathrow's position of Substantial Market Power is unlikely to weaken considerably over the medium term due to the hub and network airline effects

at the airport; the lack of realistic substitutes for both passengers and airlines; and the airport's very strong position in regard to airlines offering long-haul services.

Way Forward

46. We welcome stakeholders' views on the information presented in this paper. The CAA is consulting during 2012 on its views, and will continue to work with stakeholders to develop its analysis and to resolve the issues that have been left open at this time. Information about the consultation process, contact information and the dates for a seminar are set out in chapter 1.

1. Introduction

- 1.1 This is the non-confidential version of the CAA's Initial Views on the degree of Heathrow's market power. Excisions from the text are marked with [X].

Rationale and context for the CAA's airport market power assessments

- 1.2 Where airports enjoy high levels of market power, it can be appropriate for the CAA to apply economic regulation, so as to improve outcomes for passengers, cargo shippers and airlines. This regulation currently takes the form of a cap on the prices charged by the airport and a series of financial incentives and other obligations to encourage efficient operation, appropriate service quality and efficient investment.
- 1.3 Most UK airports are not subject to this form of economic regulation. Airports are only subject to this regulation if they have (or are likely to have) 'Substantial Market Power' and if economic regulation is likely to improve outcomes. Further, when airports are subject to such economic regulation, it can take a number of forms, and be tailored to the extent and nature of market power.
- 1.4 The CAA is committed to ensuring that its regulation of airports promotes choice and value for consumers, whilst also meeting the better regulation principles. In order to deliver on this commitment, during 2011 the CAA embarked upon a project to understand the extent and nature of market power held by the airports that are currently 'designated' for price control regulation: Heathrow, Gatwick and Stansted. This work also addresses the Competition Commission's view that the CAA should keep competition between airports under review, and that the economic regulation of Gatwick and Stansted might need to adapt to facilitate competition.²
- 1.5 These assessments will inform the CAA's views on whether these three airports should continue to be subject to economic regulation, including whether – under the proposed reforms set out in the Civil Aviation Bill (2012) – these airports should be required to hold an economic licence. The work will also allow the CAA to work with stakeholders in developing future regulation of these airports that protects consumers.
- 1.6 We set out below the initial findings of our work to date to understand the market power held by Heathrow. These views are based on the evidence currently available to the CAA. As noted above, we expect that additional evidence will become available before the CAA takes a firm view on the position of Heathrow. Reflecting this, there are a number of issues that have been left open and, whilst the CAA has sought to highlight where each airport might sit on the market power spectrum, it has not reached a definitive view on the airport at this stage.

² Competition Commission *BAA Airports Market Investigation – Final Report*, March 2009, paragraph 10.339. <http://www.competition-commission.org.uk/our-work/baa-airports/final-report-and-appendices-glossary>

1.7 We would like to thank those stakeholders who have engaged with the CAA during 2011, and invested time and money in providing evidence and analysis.

The CAA's approach to the assessing airport market power

1.8 In reaching an initial view as to the degree of market power of Heathrow, Gatwick and Stansted, we have followed the approach set out in the CAA's *Guidance on the assessment of airport market power*³.

1.9 There has been extensive stakeholder engagement, including with the three regulated airports as well as Luton and Manchester, and the main airlines of Heathrow, Gatwick and Stansted. This engagement has taken the form of:

- meetings with stakeholders to discuss relevant evidence;
- stakeholder feedback and discussion on work in progress;
- the submission of evidence by stakeholders;
- some stakeholders, including both airports and airlines, have commissioned reports by economic consultancies; and
- the CAA's stakeholder workshop held on 15 November 2011 to set out its emerging views.

1.10 We have also published a number of working papers in 2011:

- on the general market context⁴;
- catchment area analysis⁵; and
- passengers' airport preferences⁶.

1.11 While undertaking the market power assessments, we also sought the advice of an economic and a legal consultant, and have also discussed our analysis with the Office of Fair Trading.

1.12 The initial views expressed in this assessment regarding the degree of market power held by Heathrow are based on the evidence currently available to us. We expect that additional evidence will become available before we take a firm view on the position of each airport. Reflecting this, there are a number of issues that have been left open and, whilst we have sought to highlight where each airport might sit on the market power spectrum, it has not reached a definitive view on each airport at this stage.

1.13 We would like to thank those stakeholders who have engaged with us during 2011, and invested time and money in providing evidence and analysis.

³ CAA *Guidance on assessing airport market power* April 2011

<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

⁴ CAA *UK Airports Market – General Context* September 2011

<http://www.caa.co.uk/docs/5/20110905%20Market%20Context-FINAL.pdf>

⁵ CAA *Catchment area analysis* October 2011

<http://www.caa.co.uk/docs/5/Catchment%20area%20analysis%20working%20paper%20-%20FINAL.pdf>

⁶ CAA *Passengers' airport preferences – Results from the CAA Passenger Survey* November 2011

<http://www.caa.co.uk/docs/5/Passenger%20survey%20results%20-%20FINAL.pdf>

Way Forward

- 1.14 We welcome stakeholders' views on the information presented in this paper. There are two periods over which interested parties can engage with the CAA:
- Those wishing to share their **initial views** with the CAA should aim to submit any material to the CAA **by 24 March 2012**, so that these can inform the CAA's next Q6 price control publication, which is scheduled for April 2012.
 - Those wishing to engage on the **detail of the competition assessments** are invited to engage with the CAA **during 2012**, so that any additional evidence and analysis can be incorporated in an updated assessment of airport competition, scheduled for publication in late 2012/early 2013.
- 1.15 If you would like to discuss the contents of this paper, and the CAA's work on assessing airport competition, in the first instance please contact Alina Jardine Goad on 020 7453 6229 / alina.jardinegoad@caa.co.uk or Alexander Düнки on 020 7453 6212 / alexander.dunki@caa.co.uk. You can also contact Chris Hemsley on 020 7453 6237 / chris.hemsley@caa.co.uk.
- 1.16 If you would like to discuss the economic regulation of Heathrow, Gatwick and Stansted, including the Q6 work programme, please contact Richard Moriarty on 020 7453 6203 / richard.moriarty@caa.co.uk.
- 1.17 The CAA will also be hosting a **seminar**, to take forward the work on price control design for Heathrow, on **9 March 2012**. The output of these seminars – and other discussions with stakeholders – will be brought together into a publication in April 2012, which will frame the debate on the development of regulation and, where appropriate, support the process of Constructive Engagement. If you would like to register your interest in the seminars, please contact Barbara Perata-Smith, on 020 7453 6202 or Barbara.PerataSmith@caa.co.uk.
- 1.18 There will also be an opportunity to engage on the CAA's initial views on airport market power during 2012, which will also allow the CAA to work with stakeholders to narrow down those areas of uncertainty that currently exist. Stakeholders will also be able to submit further evidence – and comment on the CAA's initial views – during this period. At this stage, the CAA expects to publish its next substantive analysis of airport market power in late 2012/early 2013.

2. The market in which Heathrow competes

Introduction

- 2.1 This chapter describes the markets within which Heathrow competes. Identifying these markets is a first step in the analysis of the airport's market power, and allows the evidence on the strength of competitive constraints to be organised and presented in a structured manner.
- 2.2 Heathrow provides infrastructure and infrastructure services to its various groups of users, including passenger airlines, passengers, and cargo carriers, and also retailers and car park operators. Each of these user groups could be considered as different 'sides' of the airport market; each with its own characteristics and ability to respond to changes in the price and service offered by Heathrow.⁷
- 2.3 Indeed, reflecting the linkages between them, it is likely that the reaction of passengers, cargo shippers or airlines to changing prices and/or service quality will precipitate a reaction from the other (interdependent) users. These reactions may then act together to affect the profitability of such a price rise for the airport and, ultimately, determine the extent of the market power enjoyed by the airport.
- 2.4 In order to understand the market position of Heathrow, it is then important to consider initially the characteristics of passengers, cargo shippers and airlines – including the choices available to them to reduce their use of the airport. As a next step, the interactions and interdependences between the choices made by these different airport user groups need to be analysed to reach a view on their combined impact on the airport.
- 2.5 For this reason, this chapter first describes Heathrow's business in terms of the services it provides to its various user groups. Following a discussion the use of market definition, this chapter then goes on to consider the product and geographic markets on which Heathrow supplies services to passengers, cargo shippers and airlines. An understanding of each of the relevant market(s) relating to Heathrow's user groups is then combined to make an overall assessment of the market(s) within which Heathrow operates.
- 2.6 Reflecting this, this chapter is structured in the following main sections:
- Provision of infrastructure and infrastructure services to **passenger airlines**.
 - Provision of infrastructure and infrastructure services to **passengers**; and
 - Provision of infrastructure and infrastructure services to **cargo-carriers**.
- 2.7 This is followed by a synthesis of this material into an overall market definition for Heathrow.

⁷ This treatment of airports as operating in a multi-sided market is described in more detail in the CAA's *Guidance on assessing airport market power* paragraph 3.20 <http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

Heathrow's business

Services provided to airlines

2.8 Heathrow provides a range of aeronautical and non-aeronautical infrastructure and infrastructure services to passenger airlines. This includes facilities and services for the handling of passengers and those for the transportation of cargo, reflecting the general practice of, particularly long-haul, passenger services at Heathrow carrying cargo in their holds ('bellyhold' cargo)⁸.

2.9 Heathrow provides a wide range of different services to passenger airlines. Many of these are important, or essential, to the economic operation of passenger services. These include:

- aircraft-related aeronautical services (e.g. facilities for landing, parking, and taking off of aircraft);
- airline-facing non-aeronautical services (e.g. information technology services, check-in desks, utilities, staff security clearance and staff parking);
- office and other terminal space rentals to airlines and their groundhandlers for essential back office and passenger-facing services (e.g. ticketing, lounges, lost and found facilities);
- providing access to staff and supporting services procured by airlines (access and office rentals to groundhandlers, access to catering suppliers, etc); and
- (related to the above) providing access, security and facilities that support the loading and unloading of bellyhold cargo.

A full list of these services is set out in the Annex to this document.

2.10 We are adopting a working assumption that all of these services should be included in the product market within which Heathrow operates, as the failure to supply any one of these services would severely hamper the economic operation of a passenger airline, which means that any market power enjoyed by virtue of the ownership of the runways, taxiways and terminals would also be likely to be enjoyed over all of these services.⁹

Services provided to passengers

2.11 Heathrow provides a range of infrastructure and infrastructure services to passengers, including:

- aeronautical services, including security clearance and flight information and surface access infrastructure; and
- non-aeronautical services, including retail space and near-airport car parking.

2.12 A full list of these services is set out in the Annex to this document.

⁸ See paragraph 2.37 for details.

⁹ We note here that access to the airport, the construction and operation of its terminals and runways are all controlled by Heathrow Airport Limited.

- 2.13 Heathrow does not directly charge passengers for most of the products and services it provides them, although there is no statutory prohibition on the airport choosing to structure its charges in that way. Indeed, a number of regional airports in the UK (and a number of major airports overseas) impose charges directly on passengers, in the form of 'Airport Development Fees' and 'Passenger Facility Charges'.¹⁰ However, a notable exception is near-airport car parking, for which the airport charges passengers either itself or via an outsourced contractor.
- 2.14 More generally, Heathrow supplies a number of services to passengers and can vary its offering in ways that vary the attractiveness of the airport to passengers, as discussed in paragraph 2.90.
- 2.15 Heathrow also provides – either directly or by providing infrastructure to support third-party supply – a number of differentiated services, aimed at different passenger segments¹¹. For example, the airport offers a range of parking services that involve different transfer times to the terminals, including one that offers the use of 'pods' to shuttle passengers to/from the terminals.

Provision of products and services to cargo carriers

- 2.16 Heathrow provides infrastructure and infrastructure services to cargo-only carriers for the air transportation of cargo. This includes the provision of runway and apron space, as well as providing access to cargo-handlers, access to warehousing facilities, and infrastructure to allow the efficient onward transfer of cargo.

Provision of access to Heathrow infrastructure to third party service providers

- 2.17 Many services for airport users are provided by third party service providers. For airlines and cargo carriers, these service providers (contracted by them) include ground- and cargo-handlers respectively, and maintenance and repair operations.
- 2.18 For passengers, these service providers include food and drink, and providers of other retail services (e.g. bureau de change). In order to provide these services, suppliers typically need to rent terminal space and to obtain access to the landside and airside facilities for their staff and to bring in stock.

The use of market definition

- 2.19 Defining the relevant market is usually the first step of any competition assessment. It provides the context for the analysis by setting out the relevant set of products and geographic areas which encompass the closest substitutes for the products and services of interest.

¹⁰ At present, Norwich, Newquay, Blackpool and Durham Tees Valley impose charges directly on passengers (in addition to the charges imposed on airlines).

¹¹ We refer to market segments where we want to describe and delineate different groups of airlines and passengers that are likely to have distinct features. This is not the same as describing these as separate economic markets; we assess in this paper to which degree there might be separate markets for different market segments, or to which degree they might suggest one, albeit differentiated, product market.

- 2.20 However, as noted in our guidance, market definition is not an end in itself, but rather provides a frame of reference for analysis of competitive effects.
- 2.21 In practice, in differentiated product markets, it can be difficult to draw a line around a group of products with varying degrees of competitive constraint on each other in order to define the market. In such circumstances, it is appropriate to consider the degree of competitive constraints faced by the product in question in the round, regardless of whether they arise from within or outside a defined relevant market.
- 2.22 Markets are generally defined in two dimensions: product and geographic. The CAA's guidance sets out the basis on which we have carried out our market definition analysis. In particular, in the absence of sufficient data (including a suitable benchmark price level), rather than carry out a quantitative hypothetical monopolist test, we have assessed available evidence on airport offerings and airline and passenger needs using the principles of the test.
- 2.23 In particular, we have looked at the ability of airlines and passengers to switch their business away from the airport, the ability of other airports to begin supplying an alternative product to that of Heathrow and the effect of these factors on the profitability of any price rise by Heathrow.
- 2.24 Ideally, as set out in the CAA's *Guidance on airport market power assessments*¹², the relevant market(s) would be defined according to a price increase of 5 or 10 per cent above the "competitive price level". However, the historical price levels and structures may not be a reliable indicator of the competitive price level with regards to Heathrow due to the presence of economic regulation and the potential for one or more airports to have Substantial Market Power.
- 2.25 The CAA has not found it necessary to undertake a detailed assessment of the prevailing price level at Heathrow in order to reach its initial views on the airport's market position, for a number of reasons. First, some reliance can be placed on the price cap at Heathrow, which ensures that prices are not significantly above competitive levels, and certainly not at levels reflecting monopoly pricing. Second, the CAA's conclusions for Heathrow, whilst drawing on switching evidence, do not rely on factors that would be affected - to a significant degree - by the prevailing price level differing from the competitive level. Finally, there is a degree of consistency in the overall evidence about Heathrow's market power that provides a degree of comfort that the conclusions have not been affected by any difference between the prevailing and competitive price levels.
- 2.26 The remainder of this chapter considers the product and geographic market definitions from the perspective of passenger airlines and passengers, looking at both demand and supply side substitutability. We then draw this evidence together and consider the effects of the interdependence of

¹² CAA *Guidance on assessing airport market power* April 2011
<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

demand from the different user groups and the implications of this on the overall assessment of the markets in which Heathrow operates.

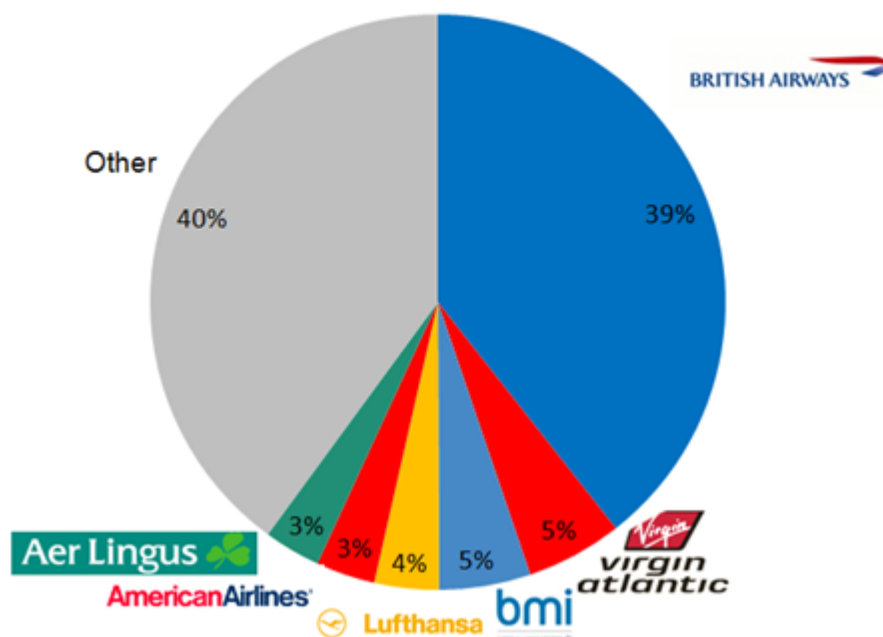
The relevant market for passenger airlines

2.27 This section provides a description of the airlines using Heathrow, which informs a consideration of the product supplied by the airport to passenger airlines, and how this might be segregated according to different types of airlines, different seasons and/or different times of day. In each case, we discuss whether it is useful to distinguish the product supplied by Heathrow according to each of these potential dimensions. This section then goes on to consider the extent of the geographic area over which Heathrow is likely to compete for these airlines.

The main airlines operating at Heathrow

2.28 British Airways, BMI and Virgin are the principal based “home” carriers and serve 49 per cent of Heathrow’s passengers. There are also a large number of other non-based airlines, including Lufthansa, each carrying a small proportion (not individually exceeding 4 per cent) of Heathrow’s passengers. Virtually all of the airlines (at least 99 per cent) operating from Heathrow have, since at least 1990, consistently been full service carriers¹³.

Figure 1 Airline shares of total passengers 2010



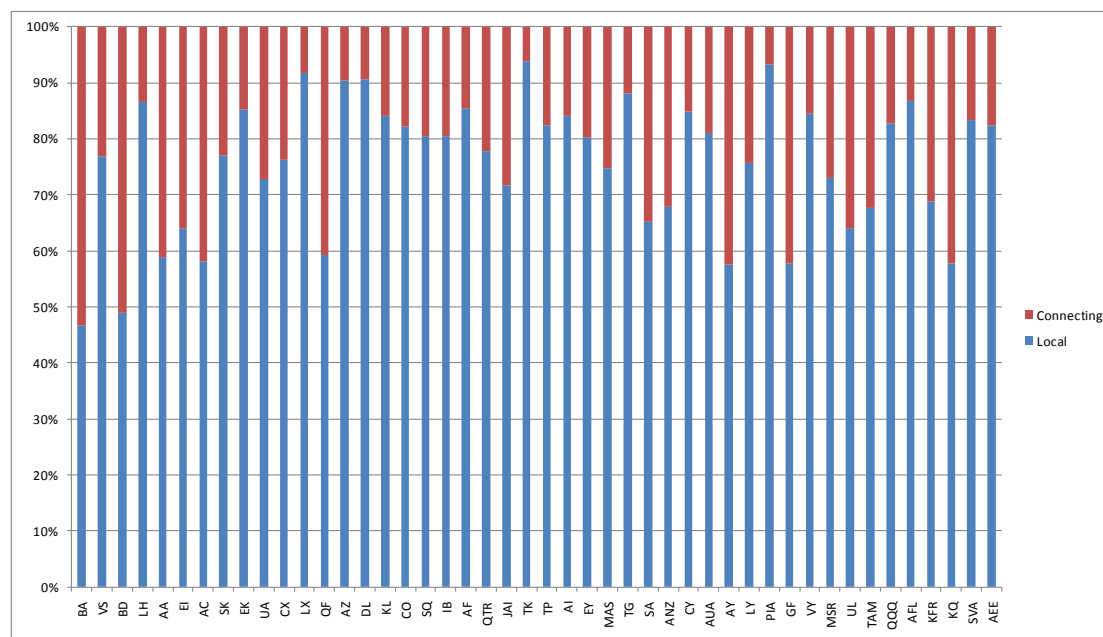
Source: CAA Statistics

2.29 To varying degrees, airlines at Heathrow carry a combination of surface and connecting passengers: 35 per cent of the airport’s passengers (approximately 23.5million) connect between flights at Heathrow, while the remaining 42.1million travel to the airport by surface transport.

¹³ Although Aer Lingus has made a number of changes to its business model, it continues to offer different fare classes and supports passengers to connect between services with its code-share partners.

2.30 Figure 2 illustrates the varying degree to which airlines depend on connecting passengers, ranging from over 50 per cent to less than 10 per cent of an airline's passengers.

Figure 2 Proportion of connecting and surface passengers by airline at Heathrow 2010 (ordered by airlines' share of passengers at Heathrow)



Source: CAA Survey

2.31 British Airways, the principal home carrier, operates its main hub at Heathrow through which passengers transfer between flights. To that end, it operates a mixture of long haul and short haul routes. Typically, short-haul routes flown with smaller aircraft “feed” the long haul routes to increase the load factors, as these may be insufficient with local surface passenger demand alone. BMI operates a similar, but smaller, network while Virgin’s long-haul network relies to a significant degree on connecting passengers flying into Heathrow with other airlines. The majority of Heathrow’s passengers are served by airlines that are aligned in one of the three main airline alliances (oneworld, Star Alliance and Sky Team), as discussed further in paragraph 3.57.

2.32 In terms of destinations, 52 per cent of passengers are carried on long-haul flights to destinations outside of Europe, while the other 48 per cent are carried on flights to European destinations, as discussed further in paragraph 3.135. Of the extra-European flights, approximately 43 per cent of airlines’ passengers are carried on routes to North America (representing 23 per cent of total Heathrow passengers). Hong Kong, India and Singapore are other long-haul destinations that carry a significant proportion of passengers.

Passenger airlines – Product market

2.33 In order to reach a view on the appropriate product market relating to passenger airlines, this section considers the nature of demand-side and supply-side substitutability and how this affects the product market definition.

Demand-side substitutability (passenger airlines)

- 2.34 Whilst all airlines require the same basic bundle of aeronautical and non-aeronautical infrastructure and infrastructure services from Heathrow, individual airlines' requirements are likely to differ according to their business model and the type of service they offer. These differing requirements are likely to affect the choices available to different airlines and the airports with which Heathrow competes, with the choices faced by the airport's marginal airlines being most informative regarding competitive constraints.
- 2.35 For the purpose of market definition, it is useful to distinguish between two particular types of airlines operating at Heathrow. First, there are a small number of airlines which are based at the airport – notably BA, BMI and Virgin – who operate networks into and out of Heathrow or rely on the networks operated by other airlines. These airlines ('based network carriers') account for approximately 50% of passengers¹⁴ and 53% of movements at the airport.
- 2.36 Second, there are a larger number of airlines who base their operations away from Heathrow, often linking Heathrow to one of their own hub airports, thereby providing connecting passenger feeder traffic into their other services. For example, Lufthansa operates a number of services from Heathrow into its German hubs, whilst American Airlines flies to a number of major US cities, including its largest hub, Chicago. Other inbound carriers, such as Air Malta, operate point-to-point services into Heathrow from their hub airport, with connecting Heathrow passengers constituting a significant percentage of their passengers of their services. Overall, inbound carriers account for 50% of passengers and 47% of movements at Heathrow. There are a number of these inbound carriers for which connecting passengers may not constitute an important proportion of their passengers on their routes into Heathrow. These airlines may well represent the marginal airlines at Heathrow, as they might be the most likely airlines to switch away from Heathrow in response to a price rise.
- 2.37 Both of these segments¹⁵ share a number of important characteristics, including that they:
- offer a range of service levels, including Economy and Premium cabins;
 - carry a significant proportion of passengers who are connecting between services, in addition to those who are travelling direct; and
 - transport significant volumes of cargo in the holds of their passenger aircraft, particularly on long-haul flights.

¹⁴ The percentages in Figure 1 add up to 49% because of rounding down of individual shares, which together add up to 49.94%.

¹⁵ We refer to market segments where we want to describe and delineate different groups of airlines and passengers that are likely to have distinct features. This is not the same as describing these as separate economic markets; we assess in this paper to which degree there might be separate markets for different market segments, or to which degree they might suggest one, albeit differentiated, product market.

- 2.38 Reflecting the common aspects of their business models, the based and inbound network carriers have similar minimum infrastructure requirements. Indeed, these infrastructure requirements are extensive, in that they require the airport to accommodate surface and connecting passengers (and their bags), bellyhold cargo shipments, and support the airlines in providing a range of premium services to their passengers. However, the importance of these services will vary between individual airlines and also between the based and inbound carriers.
- 2.39 The operations of based network carriers using Heathrow (e.g. BA, BMI) are built around both feeder short-haul routes and connecting long-haul routes, whereas other airlines (notably Virgin) rely particularly on passengers connecting to/from short-haul services operated by other airlines onto its long-haul services. As connecting passengers form an important part of these airlines' business models, the based carriers are particularly reliant on the infrastructure and infrastructure services provided for connecting passengers.
- 2.40 In contrast, the inbound network carriers tend to place fewer demands upon these connecting infrastructure services. However, whilst these inbound network carriers might focus their business models around connecting passengers through their own (overseas) hubs, they still tend to carry significant volumes of passengers who connect at Heathrow (albeit typically a lower proportion than those airlines based at the airport). This reflects the high proportion of airlines at Heathrow that are members of airline alliances, or that operate code-share agreements, which both support passengers in connecting through Heathrow.
- 2.41 Evidence from the CAA's Passenger Survey supports the view that a very large proportion of services at Heathrow have a significant proportion of connecting passengers, including both those operated by based and inbound carriers. For example, connecting passengers (of any type) account for at least 10% of the passengers for 75 out of 93 airlines at Heathrow¹⁶. This highlights the importance of network effects to these airlines' operations at Heathrow.
- 2.42 It appears, therefore, that the majority of airlines operating from Heathrow are likely to gain significant commercial advantage from the passengers who connect between different services at Heathrow. Indeed, the hub characteristics of Heathrow – and the infrastructure and services offered to support passengers connecting between flights (either self-connecting, intralining or interlining¹⁷) – appear likely to be an important factor in a significant number of airlines' decisions to locate at Heathrow. This is likely to be particularly important for those airlines that are alliance members or

¹⁶ Presentation slides from the stakeholder seminar of the 15 November 2011, Slide 9, <http://www.caa.co.uk/docs/5/111115-StakeholderEvent15Nov-FINAL.pdf>

¹⁷ Self-connecting passengers connect between flights on two separate tickets, which involves exiting to landside and then passing through central search into airside for their second flight. Intralining passengers connect between flights on the same ticket and the same airline. Interlining passengers connect between flights on the same ticket but on different airlines, between which there is an interlining agreement.

codeshare partners, or those carriers attracting significant proportions of connecting passengers outside of these codeshare agreements and alliances.

- 2.43 An additional infrastructure requirement for both based and inbound carriers is the provision by the airport of facilities for the handling of cargo. As discussed in paragraph 3.85 on switching costs, passenger airlines at Heathrow typically carry cargo (mail and/or freight) in the hold of their passenger aircraft, particularly on long-haul routes. Consequently, although the cargo-handling services are provided by a third party (cargo handlers), the majority of these airlines would require the airport to provide suitable infrastructure for cargo handlers. The CAA has seen evidence¹⁸ which supports the view that whilst revenues from the carriage of cargo are a fraction of those earned from passenger operations, these revenues are significant when compared to the overall profitability of these services.
- 2.44 Overall, therefore, the product market on the airline-facing side of the airport market appears likely to include a broad range of distinct infrastructure and infrastructure services (as set out in paragraph 2.9) which are bought by the airlines as a bundle¹⁹, and this range is likely to be similar for airlines accounting for the majority of Heathrow's passengers.

The potential to distinguish by destination and time of day and/or year (temporal markets)

- 2.45 The previous sections focused on how the differing airline business models, and their infrastructure requirements, might affect demand-side substitutability and inform the relevant product market for the assessment of Heathrow. This section considers whether there is evidence to support a narrowing of the product market at Heathrow, to distinguish between the services supplied to airlines flying to different destinations (domestic, short-haul and long-haul services) or at different times of day and/or year.
- 2.46 The nature of the capacity available at Heathrow means that, in operational terms, it is highly substitutable between different aircraft types. Further, whilst there is very little spare capacity to accommodate additional services at the airport, Heathrow has infrastructure that can accommodate a very wide range of aircraft types, capable of flying to a very broad range of destinations. The runways and taxiways are, for example, capable of handling the largest passenger aircraft currently operating. This means that there are few *physical* limitations on the ability of airlines to redeploy their slots between services to different destinations.
- 2.47 However, there are commercial and operational constraints that mean that services to certain destinations tend to take place predominantly at certain times of day. [X] These factors can combine to mean that departures to certain destinations typically take place in a relatively narrow period of time.

¹⁸ British Airways' 2010 annual report shows that for the nine months to December 2010, cargo revenue accounted for 8% of its total revenue. (page 2). www.ba.com

¹⁹ The infrastructure and infrastructure services provided to airlines by Heathrow are not substitutable, but distinct services with their own individual price. However, they are bought by the airlines as a bundle, which means that analytically they can be treated as aggregated group.

- 2.48 The distribution and frequency of services at Heathrow could also potentially fluctuate according to the Summer and Winter slot seasons, as airlines may change their flight schedule to respond to changes in seasonal demand. For example, the Start of Season reports issued by the airport slot coordinator Airport Coordination Limited (ACL) shows that approximately 100,000 fewer Air Transport Movements at Heathrow are planned during the 2011/12 Winter season (188,881) compared to the preceding 2011/12 Summer season (292,121).
- 2.49 This tendency for certain services to depart at particular times of day and the clear difference in the strength of demand for slots between Winter and Summer slot seasons opens the possibility that the airport can vary its charges by destination either indirectly – through varying charges by the time of day or year – or by directly varying charges by destination.

Current price differentiation at Heathrow

- 2.50 Heathrow does not currently operate a peak pricing strategy for its departing passenger charges, either according to time of day or slot season. This is consistent with the pricing strategies of other European hubs such as Amsterdam Schiphol, Charles de Gaulle and Frankfurt am Main. However, the airport trebles the aircraft parking charge during the mornings in the Summer slot season, and increases noise charges during certain hours of the night during both Summer and Winter slot seasons.²⁰
- 2.51 However, the airport differentiates its pricing according destination and whether a passenger is transferring through the airport, as follows:
- European vs Non-European
Heathrow differentiates its departing passenger charges according to whether the flight is to a “European” or “Other” destination, charging less for passengers travelling to European destinations. This broadly translates into a differentiation between short and long-haul operations.
 - Terminating vs Transfer
Heathrow’s charges are structured in a way that means that charges to transfer/transit passengers are lower than those levied on originating/terminating passengers.
- 2.52 On the face of it, this ability to differentiate prices by passenger origin/destination (and whether they are connecting or origin/destination passengers) might support the view that there could be a different product market for different types of services.
- 2.53 It is, therefore, useful to understand whether airlines and passengers using different services might switch between types of services in sufficient

²⁰ According to Heathrow’s 2011/12 Conditions of Use, “for occupation of a pier served stand in the Passenger Terminal Area between 07:00 and 12:29 UTC (GMT), 1 April to 31 October, each minute will count as three minutes. At all other times, the standard will apply”. Regarding noise charges in the night period, “between 00:00-03:29 UTC (GMT) 1 April to 31 October, and 01:00-04:29 UTC (GMT) 1 November to 31 March, Noise Charges are 2.5 times the normal charges in the Night Period”. Heathrow Airport Limited - Conditions of Use including Airport Charges from 1 April 2011.
http://www.heathrowairport.com/static/Heathrow_About_us/Downloads/PDF/ConditionsOfUse_LHR.pdf

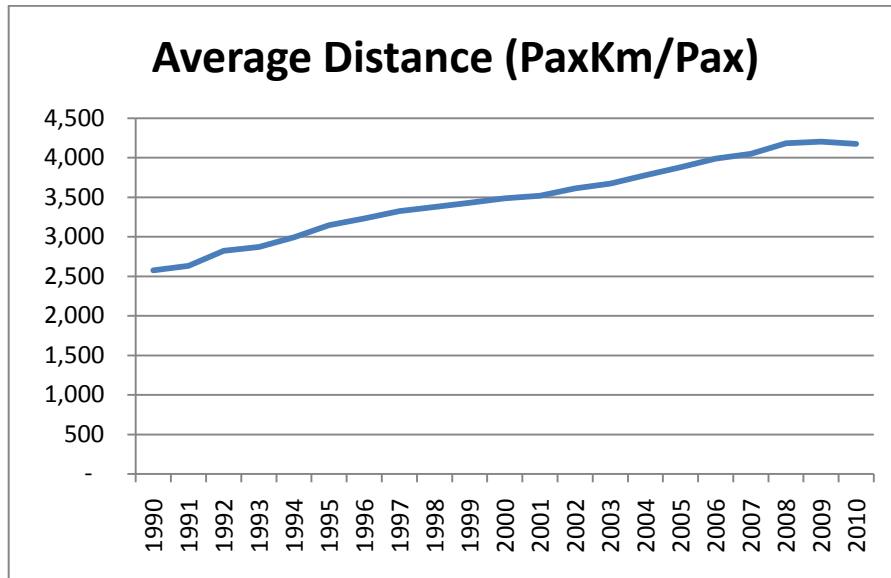
numbers to mean that there is a single product market for airport capacity (rather than there being a series of narrower markets).

- 2.54 It is useful to consider the flexibility of the based and inbound network carriers. These airlines rely on a series of short-haul feeder routes to maximise the load factors of their long-haul operations, which means that it seems unlikely that they would realistically switch a significant proportion of their operations between short- and long-haul services in response to relative price changes. Indeed, the network economics of these airlines mean that route profitability is typically undertaken on a network, rather than on an individual route, basis. This would tend to reduce the responsiveness to price changes between short and long-haul operations, which could support a segmentation of the relevant market.
- 2.55 Further, as short- and long-haul services are most economically operated by different aircraft types, there would be costs involved in acquiring and configuring new aircraft and selling existing aircraft to change the mix of short-haul and long-haul services. Indeed, BMI has previously told the CAA that switching costs from domestic to long-haul routes would be increased by the lead time required to purchase or lease additional long-haul aircraft, which could prohibit a timely response²¹. Further, an airline may need to re-plan its route network due to the impact of switching a particular route.
- 2.56 Set against this inflexibility on the part of airlines between short-haul and long-haul services, there is a degree of flexibility provided by the ability of airlines to exchange and trade slots, which might support some reallocation of services in response to any variation in pricing by destination. Further, British Airways has previously said a greater increase in airport charges at Heathrow would accelerate its shift from short-haul and long-haul services at the airport, caused in part by the existing capacity constraints. Additionally, the airline has considered ways of increasing the frequency of its short-haul services at other airports²².
- 2.57 Figure 3 below shows that the trend in average distance has been increasing since 1990, which suggests a gradual switch away from the more marginal short-haul routes in favour of long-haul routes, in part due to capacity constraints. This steady shift from short- to long-haul operations does not, however, indicate that there is flexibility on the part of the airlines to change their mix of short- and long-haul operations in the short term.

²¹ Supplementary submission to the complaint by British Midland International Limited [against Heathrow Airport Limited] under section 41 of the Airports Act 1986
<http://www.caa.co.uk/docs/5/rpg2011/bmisec41complaint.pdf>

²² Competition Commission *BAA airports market investigation* March 2009 Annex 3.5 – Annex 3
http://www.competition-commission.org.uk/assets/bispartners/competitioncommission/docs/pdf/non-inquiry/rep_pub/reports/2009/fulltext/545_3_5.pdf

Figure 3 Average distance (PaxKm/Pax) for a flight sector at Heathrow 1990-2010



Source: CAA Airports Statistics

- 2.58 Overall, it would appear that fleet and network-related switching costs would likely prevent timely switching between short- and long-haul services (and vice-versa). This may support the narrow of the product market according to destination type, although market definition can be left open in this regard, in light of the relatively limited evidence currently available.
- 2.59 Turning to the supply of capacity to airlines for surface and connecting passenger services, as discussed in paragraph 2.41, the majority of airlines at Heathrow operate services with a mix of surface and connecting passengers. It does not, therefore, appear to be possible for Heathrow to distinguish between airlines on the basis of whether they are network or point-to-point carriers. However, Heathrow currently differentiates between carriers based on the proportion of their passengers who are connecting, by varying its passenger charges. Although this could be profit-maximising behaviour, for example by incentivising the carriage of connecting passengers, the fact that airlines transport both surface and connecting passengers on their services would not support a segmentation of the product market according these passenger categories.

Supply-side substitutability: Passenger airlines – product dimension

- 2.60 According to the CAA's *Guidance on the assessment of airport market power*²³, supply-side substitution must occur "quickly, effectively and without the need for substantial sunk investment."²⁴ Since the airport industry is capital-intensive, the likelihood of an airport not currently in the product market being able to modify or upgrade its infrastructure for it to be considered as a substitute by passenger airlines operating at Heathrow would be very low. Due to the additional infrastructure requirements, supply-side substitution is even less likely for infrastructure and infrastructure

²³ CAA *Guidance on assessing airport market power* April 2011

<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

²⁴ Ibid para3.56

services to serve based network carriers, compared to serving point-to-point carriers.

- 2.61 Indeed, recent capital projects at Heathrow – notably the costs of redesigning Terminal 4 for greater surface passenger volumes – highlight the costs and timescales involved in redeploying capacity at airports to suit different profiles of passenger volumes, particularly where significant connecting passengers need to be accommodated.
- 2.62 We do not, therefore, consider that supply-side substitution is likely to broaden the relevant product market.

Summary: passenger airline product market

2.63 On the basis of the evidence currently available, a number of conclusions can be made regarding the relevant product market for assessing Heathrow's market power with regard to passenger airlines:

- The vast majority of airlines at Heathrow are likely to have similar requirements in terms of infrastructure and infrastructure services, for them to offer commercially viable services. This means that the product market covers a broad range of services, including the landing and parking of aircraft, but also extending to include the provision of terminal space for premium services (such as business lounges) and the provision of infrastructure to allow for the handling of bellyhold cargo.
- Whilst Heathrow could differentiate its pricing according to time of day or year, it instead varies its charges according to whether a flight's destination is within or outside of Europe, effectively differentiating between short- and long-haul flights, which might support a narrow of the market according to destination type. However, it is not necessary to conclude on this point to reach a view of Heathrow's market power.
- The fact that the majority of airlines operating at Heathrow operate services with a mix of connecting and surface passengers means that it is not useful – for the current assessment – to distinguish between the supply of services to point-to-point and network carriers.

2.64 Overall, in respect of the supply of services by Heathrow to airlines, the relevant product market for this assessment is the provision of infrastructure and infrastructure services, covering a broad range of aeronautical and non-aeronautical activities²⁵.

Passenger airlines – Geographic market:

2.65 To form a view on the relevant geographic market for the provision of infrastructure and infrastructure services to passenger airlines, it is useful to consider the airports to which the airlines could switch a significant number of routes, a significant number of aircraft, or their entire operation, in light of a price rise. Reflecting their different business models, it is useful to consider based and inbound network carriers separately.

²⁵ These services are set out in the full list of services in the Annex to this document.

Demand-side substitution (passenger airlines)

- 2.66 The previous section sets out how the majority of airlines operating at Heathrow require a similar (but relatively broad) range of infrastructure and infrastructure services. However, the relevant geographic market will depend upon the extent to which airlines can switch their services away from Heathrow and to another airport. In this respect, there are important differences between based and inbound network carriers.
- 2.67 In particular, the business models of based network carriers are likely to limit their ability to respond to changes in price and reduce their use of Heathrow, as they will tend to face far higher switching costs at Heathrow than inbound network carriers. This is due to a number of factors, including the nature of their network economics and the tendency for the carriers at Heathrow to focus their operations at a single airport, rather than maintaining multiple, large network bases across several airports.
- 2.68 Network airline business models also rely on the operation of both short- and long-haul routes, which means that the loss of one route will have the potential to affect the profitability of the entire operation.²⁶ This impact of individual services on the wider network represents an additional barrier against these airlines moving some services away from Heathrow, and is likely to limit the number of airports that airlines view as reasonable alternatives.
- 2.69 It is also unlikely that the based network carriers have any available substitutes to which to switch their entire operation, for a number of reasons. First, there have been substantial airline capital investments involved in developing Heathrow as a network base which are likely to mean that there are no close alternatives for such a switch, particularly in a timescale needed to support these other airports being included within the same economic market. Second, given the particularities of these airlines' route networks and the low availability of airports which sufficient capacity and infrastructure to accommodate the network, the market is might be defined particularly narrowly as the market for infrastructure and infrastructure services for terminating and connecting passengers at Heathrow.
- 2.70 This has implications for the geographic market. In response to a price rise, based network carriers considering whether to reduce their use of the airport will need to consider both the loss of revenue from the least profitable (i.e. their most marginal service) and the loss of revenue experienced across their network of services (caused by the removal of this most marginal service), which arises from a reduction in the number of convenient connections that can be offered to passengers. Given the significance of these network effects to the majority of services operated by based airlines at Heathrow, this is likely to reduce the number of airports that these airlines consider to be reasonably close alternatives to Heathrow.

²⁶ This is highlighted by the very large proportion of services at Heathrow carry significant volumes of connecting passengers (as discussed in 2.29).

- 2.71 In particular, these airlines are only likely to view an airport where they have a significant network operation as a reasonably close alternative, as switching services from one hub to another would reduce connections at one hub, but the loss of revenue would be, in part, offset by the additional network effects at the alternative hub. The alternative – switching the service to operate between two airports where there is not network base – would mean that switching away from Heathrow would sacrifice all of the revenue from the loss of Heathrow network effects, and so increase switching costs.
- 2.72 However, the major based carriers at Heathrow have only a limited number of bases at which they operate significant network hubs:
- British Airways: At Gatwick, British Airways operates its smaller, secondary hub operation with approximately 41,000 ATMs in 2010, compared to 185,000 at Heathrow. The IAG group, including British Airways and Iberia, also operates from Madrid Barajas airport which is a major hub for Iberia.
 - Virgin: Gatwick is also a secondary base for Virgin, from which it operated approximately 3,800 ATMs in 2010, compared to 14,000 at Heathrow.
 - BMI: BMI's mainline network operation (excluding BMI baby and BMI regional) is entirely based at Heathrow.
- 2.73 As network effects are likely only to be significant where there is a relatively large number of potential feeder services, this suggests that only relatively large, existing, hubs are likely to represent close substitutes to operating at Heathrow; suggesting, in particular, that Gatwick is likely to be the closest alternative to Heathrow. In this respect, however, it is notable that a number of airlines highlighted to the CAA the significantly lower yields that are typically experienced at Gatwick. This difference in yields, and the strength of network effects, was illustrated by the speed with which carriers consolidated their UK-US services at Heathrow following the liberalisation of the EU-US market, with some paying substantial sums to acquire slots to allow these moves.
- 2.74 However, British Airways and Virgin, two of Heathrow's largest airlines, also operate from Gatwick smaller networks of more holiday-oriented services, albeit with a lower percentage of connecting passengers, which would suggest that the airport could be seen as a substitute to which to switch certain routes away from Heathrow. Indeed, at Gatwick, British Airways (22 per cent of their total) and Virgin (10 per cent of their total) carry a significant percentage of connecting passengers, though lower than the corresponding figures at Heathrow. Gatwick could then be a substitute airport to which based network carriers may relocate certain services, which would complement their existing secondary hub operations at the airport. For example, citing the move of a route to Warsaw to Gatwick in Summer 2008, British Airways has said that it may switch low margin routes from Heathrow to Gatwick if these routes could be operated more profitably. However, the

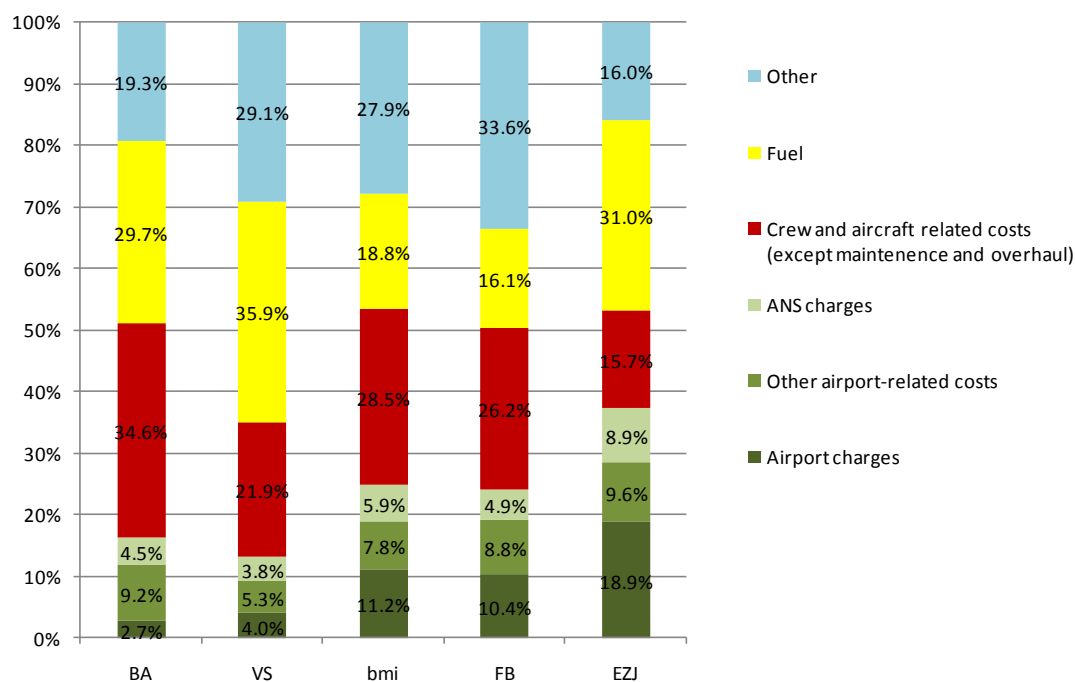
airline also emphasised the important network effects available to it at Heathrow, as they increase the number of connecting passengers.²⁷

- 2.75 More generally, however, the survey responses of both based and inbound carriers in the context of the Competition Commission's (CC) BAA airports market investigation suggest that the other London airports are not considered substitutable for Heathrow. Of the based carriers, British Airways and BMI said that Heathrow is the only viable airport from which to operate a hub operation. In addition, Virgin said that Gatwick can be considered a substitute for Heathrow for leisure passengers to a limited extent, but not at all for business passengers.
- 2.76 The inbound carriers responding to the survey were consistent in stating that they do not consider another London airport as a viable substitute from which to operate their current Heathrow services. Air Canada, SAS, Swiss and TAP all said that no other London or BAA airport represented a viable substitute for Heathrow, citing reasons including the premium yields and connecting passenger feed available, and the cost of replicating existing infrastructure investments at the airport. American Airlines and United Airlines both emphasised the extensive alliance operations at Heathrow, which provide greater connecting opportunities with their respective oneworld and Star alliance partners than at any other airport in the UK²⁸.
- 2.77 Set against this is the growth of alliances and international airline groups, such as IAG and Lufthansa. These groups operate from multiple hubs and could switch aircraft between hubs in different locations. This might suggest the potential for IAG to face lower switching costs between Heathrow and its Spanish hub(s), and for BMI to be able to relocate capacity to other Lufthansa operations. However, the switching costs for established network carriers remain prohibitive on the whole.
- 2.78 An additional factor, suggesting that airlines at Heathrow may not be particularly responsive to a rise of between 5 and 10 per cent in airport charges, is the cost structure of the airlines operating from the airport. Figure 4 sets out the operating cost structure of the major UK airlines, with the first three columns showing that the share of airport charges varies from approximately 3 per cent and 4 per cent for Virgin and British Airways respectively to 11 per cent for BMI. Airport charges therefore appear to be a relatively small part of a Heathrow airline's operating costs. As a result, an increase in airport charges of between 5 and 10 per cent seems unlikely in itself to have such a significant impact on an airline's costs that it would respond by switching away from the airport.

²⁷ Response to the Competition Commission airline survey BAA airports market investigation, Annex 3.5 - Annex 3. http://www.competition-commission.org.uk/rep_pub/reports/2009/fulltext/545_3_5.pdf

²⁸ Competition Commission *BAA airports market investigation*, Appendix 3.5, Annex 3. March 2009 http://www.competition-commission.org.uk/rep_pub/reports/2009/fulltext/545_3_5.pdf

Figure 4 Shares of operating costs of major UK airlines²⁹



Source: CAA airline account information, latest available financial years³⁰

2.79 In contrast, inbound carriers are likely to have more ways to redeploy their aircraft away from Heathrow whilst avoiding a large adverse impact on their networks. In particular, a service operating between Heathrow and their network hub can be redeployed on a number of alternative services out of that hub. This alternative service might be expected to deliver similar (if, on average, not as significant) network benefits to the airline. Whilst the switching costs may still be significant, they appear likely to be materially lower than those experienced by based carriers at Heathrow, by virtue of the impact of network effects on switching costs. However, based on inbound carriers' responses to the CC's airline survey, these carriers seem to be more likely to switch to an airport more distant than the south east of England, which may include Europe and further afield depending on their particular business model.

2.80 It is also relevant that the strength of demand relative to available capacity would be likely to mean that any switching by incumbents would prompt entry and/or expansion by competing airlines. This would reduce the adverse impact on the airport, and narrow the relevant market.³¹

²⁹ The airlines included in this table are British Airways (BA), Virgin (VS), BMI (bmi), Flybe (FB), and easyJet (EZJ).

³⁰ Figures taken from Table 6 of the 2009/10 airline accounts published regularly on the CAA's website: <http://www.caa.co.uk/default.aspx?catid=80&pagetype=88&pageid=13&sglid=13>. Airport-related costs for the purpose of this figure include the following line items: 22, 24, 25, and 27. This is likely to include also costs for services that fall outside the services relevant for this assessment, for example for ground handling services. Costs charged for relevant services provided by airport operators are therefore likely to constitute a lower share.

³¹ If the airport is insulated from the impact of switching, this increase the likelihood that the hypothetical monopolist test is met at the airport level.

Supply-side substitution: Passenger airlines – Geographic market

2.81 As discussed in paragraph 2.60, supply-side substitution must occur “quickly, effectively and without the need for substantial sunk investment.”³² Given the capital-intensive nature of airports offering services to network carriers, and the additional sunk costs associated with developing networks, we do not consider that supply-side substitution is likely to broaden the relevant geographic market. Supply side substitutability is not relevant to geographic markets in the context of airports since it is not possible for an airport in one geographic market to begin supplying passengers in another geographic market without relocating, opening a new airport or improving surface access. None of which would be possible in a short time frame.

Summary: Passenger Airline Geographic Market

2.82 As discussed in the context of the product market, Heathrow supplies aeronautical and non-aeronautical infrastructure and infrastructure services to passenger airlines for the provision of both surface and connecting passenger air and cargo transportation.

2.83 The geographic extent of this economic market – from the perspective of airlines – appears to vary somewhat depending upon the airline business model being considered. This suggests that Heathrow’s interaction with airlines takes place in a number of different – but overlapping – geographic markets. For based carriers with network-type operations, Heathrow is likely to be competing in a market that appears to be no wider than Heathrow and, for some services, Gatwick. For inbound carriers, the most important competitive discipline is likely to come from other European airports in major conurbations for short-haul inbound carriers, and from such airports in Europe and much further afield for long-haul inbound carriers.

2.84 However, to reach a view on the overall market in which Heathrow operates, this view of the airline-facing aspects of Heathrow’s operations needs to be combined with an understanding of the passenger-facing operations, as discussed in the following section.

The relevant market for passengers

2.85 The previous sections considered the product and geographic market(s) that relates to the supply of airport services by Heathrow to airlines. This section considers the product and geographic market(s) for the supply of services to passengers.

2.86 This section is structured in a similar way to the previous section, first considering the relevant product market(s) and then the relevant geographic market(s).

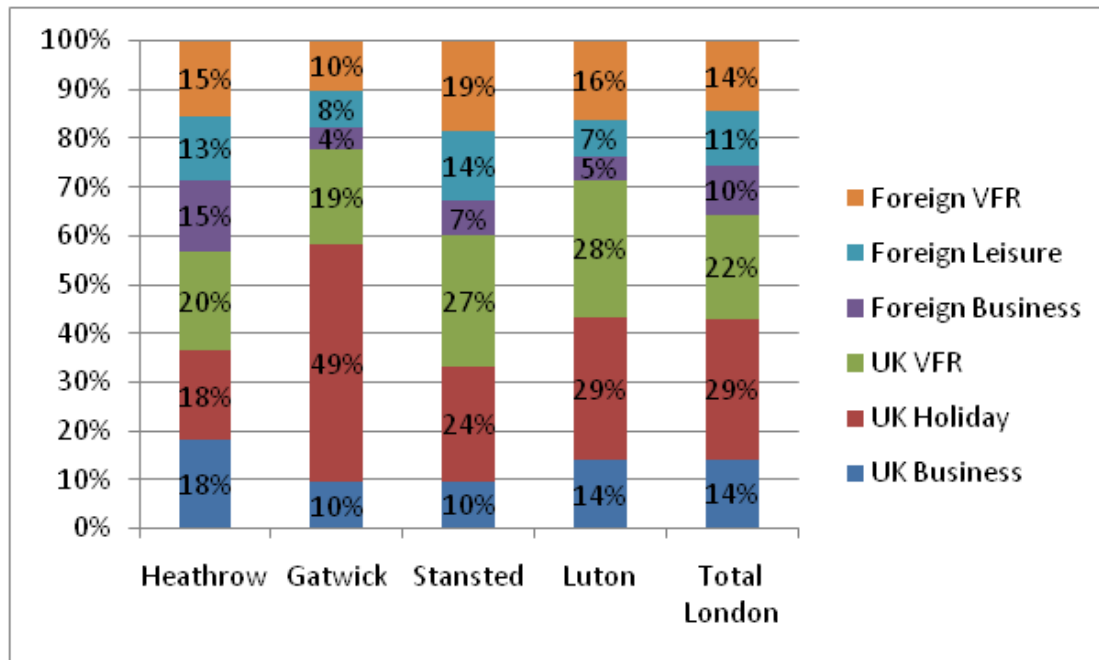
2.87 The section that follows then brings together the assessment of the relevant market(s) for the passenger-facing aspects of Heathrow’s operations, with the airline-facing aspects, in order to describe the relevant markets within which Heathrow operates.

³² CAA *Guidance on the assessment of airport market power* April 2011 paragraph 3.56
<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

The main groups of passengers at Heathrow

2.88 There were approximately 66 million passengers using Heathrow in 2010. The airport is the largest in the UK, followed by Gatwick (31 million), Stansted (19 million), Manchester (18 million) and Luton (9 million)³³. Approximately thirty-five percent of Heathrow's were connecting passengers, with the remainder travelling to the airport by surface transport. Passengers can be further categorised according to their country of residence and their journey purpose. Figure 5 sets out the shares of these categories at the four major London airports.

Figure 5 Share of passengers by journey purpose and residence



Source: CAA Passenger Survey (several years weighted to 2010 levels)

2.89 Heathrow has a relatively even distribution of each group of passenger, though slightly more UK resident passengers. This is in contrast to Gatwick, which has 49% UK holiday passengers, while UK holiday passengers and passenger visiting friends and relatives (VFR) have the largest share at Stansted and Luton.

Passengers – Product market

2.90 In order to reach a view on the appropriate product market relating to passengers, this section considers the nature of demand-side and supply-side substitutability and how this affects the product market definition.

Demand-side substitutability (passengers)

2.91 Each type of passenger requires the same basic bundle of aeronautical and non-aeronautical infrastructure and infrastructure services from Heathrow in order to complete their journeys safely and in a reasonable degree of

³³ The CAA's Market Context paper contains greater detail. CAA *UK Airports Market – General Context* September 2011 <http://www.caa.co.uk/docs/5/20110905%20Market%20Context-FINAL.pdf>

comfort. These include: surface access to the terminals; security clearance; gate rooms and other waiting areas; and toilet and refreshment facilities.

- 2.92 Some passengers also require the airport to provide particular services – such the provision of services to Passengers of Reduced Mobility (PRM), and baggage reclaim areas – or demand services that airports choose to provide, such as specialist retail and/or entertainment facilities.
- 2.93 The key question for determining the passenger product market appears to be whether it is appropriate to adopt a product definition that treats the supply of all of the above facilities as being part of a single product market, or whether it is appropriate to identify sub-markets, relating to the supply of particular services to certain groups of passengers.
- 2.94 In common with the approach adopted for the airline market definition, the appropriateness of adopting a narrow product market definition will depend upon whether the airport is able to vary its service offering to different passenger groups and whether these passengers are able to respond to a sufficient degree so as to support a single, broader product market.
- 2.95 We consider below three ways in which the airport might seek to differentiate between passengers, namely based on their: point of origin; destination; and journey purpose.

Distinguishing by passenger point of origin

- 2.96 Airports do not contract directly with passengers during the booking process, do not have access to passenger address or nationality information, and so seem unlikely to be able to directly distinguish between passengers on the basis of their precise point of origin.
- 2.97 However, Heathrow can distinguish between passengers on the basis of whether they are travelling to the airport by surface access transport (i.e. they are surface passengers) or whether they are flying in to Heathrow to connect to another flight (i.e. they are connecting passengers).
- 2.98 These two groups of passengers would make use of different parts of the airport infrastructure. For example, while surface passengers would use the surface access infrastructure and services and central search facilities from landside, connecting passengers would not make use of any surface access infrastructure or services, as they remain airside.
- 2.99 In addition, surface and connecting passengers appear to view very different airports as alternatives to Heathrow. Evidence published in the CAA's working paper on passengers' airport preferences suggests that surface and connecting passengers have different choice sets of airports to which they would be willing and able to switch.³⁴ In general terms, surface passengers view as substitutes other airports within a certain distance of their point of origin (e.g. their domicile or place of business) to which they can travel to by surface access transport. By contrast, connecting passengers view as substitutes airports into which they can fly to connect to an onward flight to

³⁴ CAA *Passengers' airport preference – results from the CAA passenger survey* November 2011
<http://www.caa.co.uk/docs/5/Passenger%20survey%20results%20-%20FINAL.pdf>

their final destination. Indeed, these two kinds of passengers are likely to have very different characteristics when viewed by an airport such as Heathrow, with differing infrastructure requirements, different choice sets and different levels of price responsiveness.³⁵

2.100 Overall, it is useful to treat these two passenger groups as being in separate economic markets (as viewed by the airport).

Travel class

2.101 As discussed in the context of journey purpose, airlines and airports might offer additional services to passengers willing to pay for a higher quality airport experience. This can include, for example, lounges, fast track check-in, boarding and security checks. Table 1 shows the share of passengers travelling in premium travel classes at London airports.

Table 1 Share of premium/non-premium passengers at London airports

	LHR	LGW	STN	LTN	LCY	Grand Total
First+Business	5%	1%	0%	0%	7%	3%
P Economy	4%	1%	0%	0%	4%	2%
Economy Flexible	3%	0%	0%	0%	7%	1%
Economy	88%	98%	100%	100%	82%	94%

Source: CAA passenger survey³⁶

2.102 With the exception of business-focused London City airport, Heathrow has the largest proportion (12 per cent) of passengers travelling in premium travel classes. These two airports have a large share of business-oriented passengers and those that are willing to pay for premium travel classes. A smaller proportion (2 per cent) of Gatwick's passengers travel in premium travel classes. As discussed in the section on passenger airlines, a large share of Gatwick's passengers are flown by airlines that do not offer any premium travel classes, particularly low cost carriers. Furthermore, short-haul flights tend to have a smaller share of premium passengers than long haul flights. The other two London airports Stansted and Luton, however, serve even smaller numbers of premium passengers than Gatwick.

2.103 Passengers could also switch between different travel classes in response to a price rise in one travel class, which is aided by their being a range of different service propositions, including economy, premium economy business and first class. However, perhaps more importantly, airlines that fly a mix of passengers in different cabin classes and control the configuration of their planes, whilst airports are not able directly to identify the cabin class that a passenger is travelling. There is, therefore, no obvious way for airports to

³⁵ It is also relevant to note that any variation in the pricing to these two groups of passengers is unlikely to prompt a connecting passenger to become a surface passenger at the airport (as travel into Heathrow would still be required to do so) and surface passengers can only become connecting passengers through Heathrow if they travelled to another airport, then flew back into Heathrow on a connecting ticket to a different final destination.

³⁶ Given the practical difficulties of interviewing premium passengers (as they tend to go to the gate very late from the lounges) the survey results might understate the absolute number of premium passengers. However, the results give an indication of the relative importance of premium passengers of different airports.

distinguish between passengers on the basis of their cabin class (we discuss below the potential relevance of distinguishing between *airlines* on the basis of their business model).

- 2.104 We do not, therefore, consider it appropriate to distinguish between passengers on the basis of the cabin class in which they are travelling, for the purposes of market definition.

Distinguishing by passenger destination

- 2.105 It might also be useful to distinguish between passengers on the basis of their destination type. Whilst the infrastructure provided to short-haul and long-haul passengers is largely the same – as is discussed above – the airport is able to (and does currently) vary its passenger charges to airlines on the basis of destination type.
- 2.106 This raises the question of whether – in response to such a change in pricing structures – passengers would be able to vary their use of the airport and, in particular, switch between short- and long-haul services.
- 2.107 The propensity of passengers to vary their use of short- and long-haul services will depend on the strength of their preference to travel to a particular destination. For some passengers – notably those travelling for holiday purposes – there is likely to be a degree of flexibility between different destinations, such as between different Spanish beach resorts (or even between Spanish and Caribbean beach resorts), or European cultural cities.
- 2.108 However, for passengers travelling for business or to visit friends and relatives, there is likely to be a particularly strong destination preference, with the willingness to substitute between different destination airports being limited to those serving similar geographic areas. It also seems possible that whilst long-haul leisure passengers might switch between different destination airports, the substitution of a holiday at a long-haul destination with one at a short-haul destination is likely to represent a very significant change in the nature of the holiday.
- 2.109 It is possible that changes in the structure of short- and long-haul charges might, in some cases, influence some passengers to switch from a single long-haul service from Heathrow to a connecting service involving a short-haul service followed by a further short or long-haul service. However, the relative inconvenience involved in passengers accepting a connection between services, suggests that this form of responsiveness is unlikely to undermine differentiation between short- and long-haul services.
- 2.110 Overall, the relevant market can be left open with regard to segmenting according to short- and long-haul passengers. However, it would be important to understand how the choice sets and potentially different switching behaviour of these two passenger groups are likely to affect the competitive constraints faced by Heathrow.

Distinguishing by passenger journey purpose

- 2.111 The final way in which Heathrow might differentiate between passengers is on the basis of journey purpose. The CAA³⁷, the OFT³⁸ and European Commission³⁹ have highlighted the differences between passengers travelling on business, holiday and to visit friends and relatives (VFR). In general terms, business passengers (who may not be travelling in business or other premium cabins) tend to place particular value on the timing and frequency of services, whilst being less responsive to changes in prices than leisure or VFR passengers. These different demand characteristics might encourage differentiation by the airport between the supply of services to business and holiday/VFR passengers.
- 2.112 However, airports do not contract directly with passengers and have no way to directly identify their journey purpose. Instead, airports might vary their prices by time of day and/or year, so as to increase prices at times when business passengers typically fly. Although the tendency of business passengers to travel at certain times might provide an additional incentive on the airport to vary its pricing across the day and/or year, Heathrow does not currently operate such a charging structure.
- 2.113 The airport might also offer differentiated service levels to different passengers, in order to take advantage of the differing demand from these groups. Indeed, a number of airlines offer premium ‘fast track’ services aimed at business passengers. At present, the most apparent differentiation of service provided by Heathrow is the pricing of short-term and business car parks, where there is a significant premium over off-airport and more distant facilities. Whilst this might represent indirect price discrimination, the differences in pricing also reflect clear differences in the nature of the product provided at the different car parks. It is also relevant that Heathrow does not exclusively provide all of the car parks around Heathrow, and thus is subject to some competitive pressure, albeit that much of this competition requires access to the terminals, which is controlled (and priced) by Heathrow.⁴⁰
- 2.114 Overall, the airport is unlikely to be able to distinguish sufficiently clearly between passengers on the basis of their journey purpose. However, there may be ways – such as through the pricing of convenient car parking – where the airport may be able to differentiate charges between passengers who are more time sensitive and less price sensitive. However, it may be relevant to

³⁷ CAA *Demand for outbound leisure air travel and its key drivers* December 2005 http://www.caa.co.uk/docs/5/ERG_Elasticity_Study.pdf ; CAA *UK business air travel: traffic trends and characteristics* May 2009 <http://www.caa.co.uk/docs/5/ergdocs/20090515BusinessTravel.pdf>

³⁸ OFT *Anticipated acquisition by Flybe Group Limited of the BA Connect business of British Airways plc* 7 February 2007 http://www.of.gov.uk/shared_of/mergers_ea02/361227/Flybe.pdf

³⁹ DGCOMP C.39596 *Commission decision of 14.01.2010 relating to a proceeding under article 101 of the Treaty of the Functioning of the European Union and Article 53 of the EEA Agreement* paragraph 20 http://ec.europa.eu/competition/antitrust/cases/dec_docs/39596/39596_4342_9.pdf See also footnote 58

⁴⁰ On 15 April 2011, the High Court ruled that Heathrow Airport Limited had breached the Competition Act 1998 by limiting access to the Heathrow airport forecourts for parking companies who provided valet parking services, placing them at a competitive disadvantage. *England and Wales High Court (Chancery Division) Purple Parking Ltd & Anor v Heathrow Airport Ltd [2011] EWHC 987 (Ch)* (15 April 2011) <http://www.bailii.org/ew/cases/EWHC/Ch/2011/987.html>

consider the characteristics of passengers according to their journey purpose when assessing their willingness and ability to switch away from Heathrow.

Provision of infrastructure and access to third-party suppliers

- 2.115 A further factor that might affect passengers' choice of airport is the supply of retail services within the terminal. In this respect, the airport provides terminal space, and typically controls the overall retail offering within the terminal, often with a revenue-sharing arrangement.
- 2.116 It is useful to distinguish between retail services that are related to the passage of passengers through the airport, where passengers may have low levels of discretion as to whether they might make a purchase, and where passengers are highly discretionary.
- 2.117 For those services where most passengers will have a choice as to whether to consume the product or service – such as fashion and electronics – we have identified no reason to suggest that passengers would be any less sensitive to the price and service offering than in other retail environments. Further, the suppliers of these goods and services will generally have other options to providing their services at Heathrow, since they are part of wider retail markets. It is unlikely, therefore, that Heathrow would be able to raise prices profitably to these suppliers, or for the suppliers to raise prices to passengers, above the competitive level⁴¹. Consequently, we treat those services as being part of a wider retail market and we do not consider them again in this paper.
- 2.118 Turning to those services that are less discretionary – which might include the provision of food and drink and travel essentials, such as bureau de change – it is possible that a significant proportion of passengers have somewhat limited options as to whether or not to purchase these services. This will vary depending upon the individual service being considered. For example, given the waiting times that can be involved in air travel, and security restrictions, many passengers may face little choice but to purchase some food and drink. In such circumstances, the airport could limit the space available to particular retail offerings, and/or limit competition between different suppliers, and in doing so put upward pressure on prices to passengers, and increase rental payments to the airport (including any revenue sharing arrangements).
- 2.119 It appears, therefore, that if the airport enjoys a position of substantial market power over the provision of aeronautical infrastructure, it might also enjoy a similar position in respect of some retail activities.

Supply-side substitution

- 2.120 According to the CAA's *Guidance on the assessment of airport market power*⁴², supply-side substitution must occur "quickly, effectively and without the need for substantial sunk investment."⁴³ Since the airport industry is

⁴¹ The locational characteristics of airports, with their consistent and high footfall might, however, justify a premium on retail rents over some other retail environments.

⁴² CAA *Guidance on the Assessment of Airport Market Power* April 2011 paragraph

⁴³ *Ibid* paragraph 3.56

capital-intensive, and the construction of a terminal would require time and substantial sunk investment, the likelihood of an airport not currently in the product market being able to modify or upgrade its infrastructure for it to be considered as a substitute by passenger using Heathrow would be very low.

- 2.121 However, for some market segments at Heathrow, it is possible that airports could expand their operations, and attract passengers away from Heathrow. Given the sunk costs involved in building an airline network and, to a lesser degree, the costs associated with launching a long-haul service, it seems unlikely that this form of competitive constraint will take place for long-haul or connecting passengers. It is possible that airports currently serving Business Jets might choose to enter the market for commercial passengers. In light of the relative size of Heathrow and any such new entrant, it seems unlikely that this form of supply-side substitution would broaden the relevant market for passengers.

Summary: passenger product market

- 2.122 On that basis of the evidence currently available, the relevant product market for assessing Heathrow's market power in respect of passengers is likely to cover a range of aeronautical and non-aeronautical services that are required for the reception, processing and boarding of passengers. This product is also likely to include a range of non-aeronautical services, such as the provision of a subset of retail activities and surface access connections to the terminals.
- 2.123 It appears that this passenger product market might need to be separated into the services provided to connecting and surface passengers. Further, it could be argued that the different choice sets of passengers on short- and long-haul services, and different characteristics of passengers according to journey purpose, might also support a narrowing of the product market according to these two dimensions. However, the current evidence suggests that no firm conclusion needs to be reached regarding this narrowing of the passenger product market. Nevertheless, it will be important to consider the impact of these distinctions between passengers on the competitive constraints faced by Heathrow, and these distinctions are, therefore, considered in the next chapter.

Passengers – Geographic market

- 2.124 To form a view on the relevant geographic market for the provision of infrastructure and infrastructure services to passengers, it is useful to consider the airports to which significant numbers of passengers could switch in light of a price rise of between five and ten per cent.
- 2.125 Reflecting the above discussion of how the airport might differentiate between different passenger groups, it is useful to consider the extent of the geographic market, focusing on the differences between the market for connecting and for surface passengers. In doing so, it will be relevant to consider the impact of differing characteristics of short- and long-haul passengers and those travelling for business, leisure or VFR.

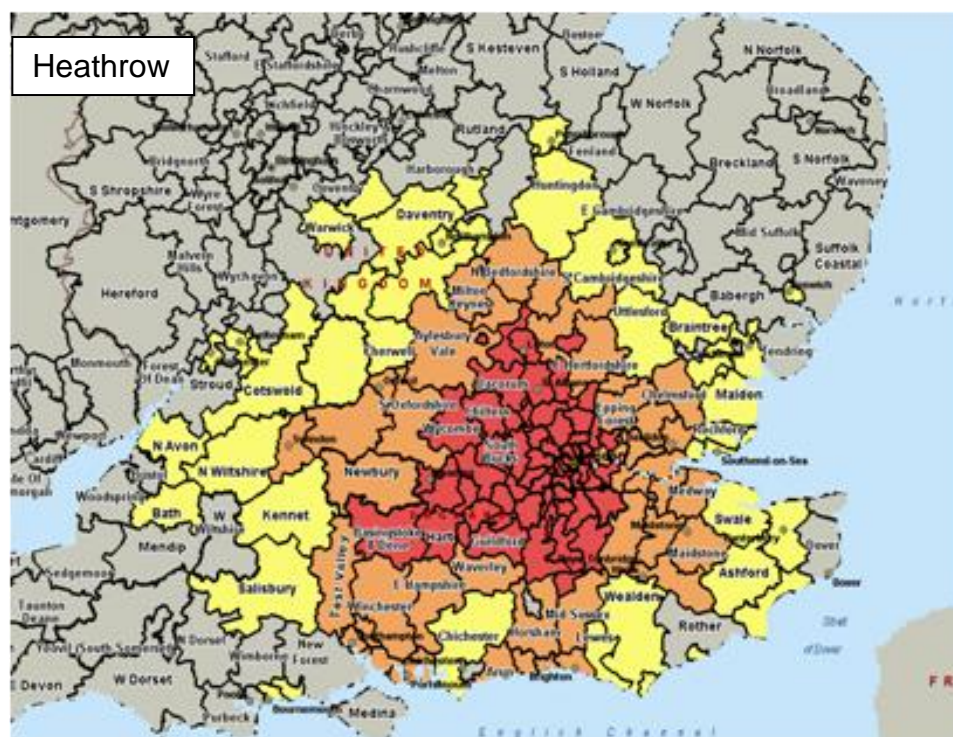
Surface passengers

- 2.126 The evidence in the CAA's working papers on catchment area analysis and passengers' airport preferences⁴⁴ suggests that, in general, surface passengers at Heathrow view airports in the south east of England as viable substitutes.
- 2.127 In particular, it showed that, under a number of different methodologies, Heathrow draws its passengers from a particularly broad geographic area. For example, 20 per cent of its passengers travelled for longer than 105 minutes to reach the airport. There is also a significant concentration of Heathrow's passengers in the Greater London area, where there is an extensive overlap with the passenger catchments of Gatwick, Stansted and Luton airports. Indeed, under one methodology for calculating catchment overlaps, 62 per cent of Heathrow's passengers originate from districts where there is a four-way overlap between the four largest London airports.
- 2.128 In this context, it is also relevant that other competition authorities have considered that the geographic market for passengers extends to include at least the south east of England. This is same geographic scope for the market defined by the Office of Fair Trading (OFT) in the context of the BAA airports market investigation, while the Competition Commission left it open⁴⁵.
- 2.129 This provides a strong basis to conclude that the relevant geographic market for Heathrow's O&D passengers is at least as broad as the south east of England.
- 2.130 However, given the location of Heathrow and its surface access infrastructure, it is likely that the airport operates in a market that also extends to the west and north. As Figure 6 shows, even on the basis of a 90 minute travel time, Heathrow's catchment extends west into Wiltshire and north to Bedfordshire.

⁴⁴ CAA *Catchment area analysis* October 2011 <http://www.caa.co.uk/docs/5/Catchment%20area%20analysis%20working%20paper%20-%20FINAL.pdf>
CAA *Passengers' airport preferences – Results from the CAA Passenger Survey* November 2011
<http://www.caa.co.uk/docs/5/Passenger%20survey%20results%20-%20FINAL.pdf>

⁴⁵ OFT *UK airports – report on the market study and proposed decision to make a market investigation* December 2006 http://www.of.gov.uk/shared_of/reports/transport/oft882.pdf and Competition Commission *BAA airports market investigation* March 2009 http://www.competition-commission.org.uk/assets/bispartners/competitioncommission/docs/pdf/non-inquiry/rep_pub/reports/2009/fulltext/545.pdf

Figure 6 60, 90 and 120 minute surface access travel times for Heathrow



Source: CAA analysis, using Microsoft Mappoint and DfT surface access travel times

- 2.131 However, when considering the competitive effects in some market segments, such as long-haul leisure passengers, it may be appropriate to adopt a larger surface travel time (as it constitutes a smaller proportion of their overall travel time), which could mean that a number of airports in the UK beyond the south east of England may be seen as reasonably close substitutes. Indeed, airports such as Birmingham and Manchester might be relevant sources of competitive constraint for long-haul services, and could be considered as being within the relevant market for long-haul, leisure passengers. More generally, the potential for strong interactions between a series of neighbouring airports – referred to as ‘chains of substitution’ – might act to broaden the geographic market for passengers.
- 2.132 In contrast, and as discussed previously, some passengers are likely to place a particular premium on convenience and be reluctant to travel long distances to reach an airport. In particular, competition for business passengers, and those travelling on domestic services, is likely to take place in a narrower market. However, given the strength of overlaps between the four largest London airports over the Greater London area, it seems likely that the market for these passengers still extends to include the south east of England.
- 2.133 Overall, the geographic market for surface passengers can be left open and said to be covering a very broad geographic area covering at least the south east of England, and potentially extending further to the north and west.

Connecting passengers

- 2.134 Connecting passengers have very different views from those travelling on a surface basis as to the airports that are reasonably close substitutes to

Heathrow. In particular, connecting passengers are more likely to view an airport as a reasonably close substitute if it offers services that provide an equivalent set of connections that allow travel to their ultimate destinations with a comparable overall travel time.

- 2.135 Reflecting this, evidence in the CAA's working paper on passengers' airport preferences⁴⁶ suggests that for a significant proportion of connecting passengers, this choice set includes at least the three other major European hub airports: Amsterdam Schiphol, Frankfurt am Main and Paris Charles de Gaulle.
- 2.136 However, it is possible, depending on their final destination, that airports further afield with connecting infrastructure could be seen as viable substitutes for connecting passengers. First, the results of the passenger survey inevitably reflect the major passenger flows passing through Heathrow, whereas some smaller passenger flows – such as from Rio de Janeiro to Singapore – might view Dubai as a reasonable alternative to Heathrow. Second, a number of regional airports – including those in the UK – that offer long-haul services to distant hub airports, allow passengers to connect onto their ultimate destination. For example, a passenger in Edinburgh travelling to Las Vegas might choose to fly to Heathrow for a connection onto a direct service to Las Vegas, or opt to fly to New York and then connect on to the final destination.
- 2.137 As a result, the geographic market for infrastructure and infrastructure services to connecting passengers covers at least the other major European hub airports.
- 2.138 The market could also extend to include a number of more-distant hubs. However, when defining the market we are seeking to identify the area over which the most significant competitive constraints arise. Heathrow operates as a hub for a number of important passenger flows. As discussed in the next chapter, 51 per cent of Heathrow's connecting passengers are travelling between Europe and either North America or the Rest of the World, with the next largest proportion (20 per cent) travelling between North America and the Rest of the World. This provides a strong basis to include the major European hubs in the geographic market, as they will also be operating services that do, or can, meet demand from these important passenger flows.

Summary: Passengers – Geographic market

- 2.139 From the above, two relevant markets can be defined. The first is the market for the provision by airports of infrastructure and infrastructure services to surface passengers in the south east of England. The second is the market for the provision by airports of infrastructure and infrastructure services to connecting passengers in Europe.
- 2.140 Although the relevant markets defined in this section may appear quite broad, it is the interaction at the airport of the passengers in these markets

⁴⁶ CAA *Passengers' airport preferences – Results from the CAA Passenger Survey* November 2011
<http://www.caa.co.uk/docs/5/Passenger%20survey%20results%20-%20FINAL.pdf>

with airlines in their respective relevant markets that affect the competitive constraints faced by the airport and affect the profitability of a price increase.

Provision of infrastructure and infrastructure services to cargo-carriers

- 2.141 Heathrow also provides services to a limited number of freight-only services. Under the Traffic Distribution Rules⁴⁷, these aircraft are excluded from both Heathrow and Gatwick at peak times. Whilst Heathrow handles more cargo tonnage than any other UK airport, the majority of these volumes are not carried in freight-only services.
- 2.142 Instead, cargo departing from or arriving at Heathrow is carried mostly in the hold of aircraft operated by passenger airlines. According to CAA Airport Statistics, approximately 74,600 tonnes of cargo were flown from Heathrow in 2010 on cargo-only flights. This compares to the 1.4 million tonnes of cargo carried as bellyhold in the same period. Some of the freight-only services are operated by airlines that also operate passenger services. Indeed, the only regular cargo-only services flown by a cargo-only carrier are those between Heathrow and destinations in Europe and North Africa flown by the freight forwarder DHL⁴⁸.
- 2.143 The CAA has been told, and the scale of the cargo shipping operations around the airport suggests, that Heathrow is an important UK cargo hub for express and premium services. The cargo-only services are also likely to form part of the overall network of cargo services at the airport, and allow the transfer of cargo between bellyhold and cargo-only services. It is possible, therefore, that the presence of some cargo-only services supports the operation of the cargo market in general at the airport, and the revenues earned by passenger airlines from their bellyhold operations.
- 2.144 However, in light of the relatively small proportion of services operated by cargo-only aircraft – and the consideration of bellyhold cargo in the section on passenger airlines – it does not seem likely that the overall market position of Heathrow will materially depend upon the characteristics and competitive constraints that might exist in this market segment. For this reason, we do not consider the impact of cargo-only services any further.

Provision of access to Heathrow infrastructure to third party service providers

- 2.145 Many services for airport users are not provided by airports or airlines and are instead provided by third parties. For airlines and cargo carriers, these service providers include ground- and cargo-handlers respectively, and maintenance and repair operations. For passengers, these service providers include suppliers of food and drink, retail and airport cleaning companies.
- 2.146 In order to provide these services, these providers must obtain access to Heathrow's infrastructure through various control posts. Since Heathrow

⁴⁷ The London Air Traffic Distribution Rules (TDRs) essentially prevent cargo and general aviation operations from Heathrow and Gatwick at peak times (i.e. most of the day), subject to exemptions granted by the airport operator. Further details can be in Appendix 6.2 of the Competition Commission's BAA airport market investigation March 2009 http://www.competition-commission.org.uk/rep_pub/reports/2009/fulltext/545_6_2.pdf

⁴⁸ Operated by European Air Transport for DHL.

operates all of these control posts, the airport controls the ability of these third-parties to provide their services.

- 2.147 The ability to obtain suitable security clearance and access for third-party suppliers is, therefore, an important aspect of the operation of passenger and cargo airlines. However, it does not appear necessary to identify a separate market for access to the airport's infrastructure. Instead, we have treated the ability to secure access for third-party suppliers as an important aspect of the product market supplied to airlines and to passengers.

Reaching a view on the market within which Heathrow operates

- 2.148 This chapter has discussed the relevant markets within which Heathrow operates. Consistent with the CAA's *Guidance on the Assessment of Airport Market Power*, it has adopted as its analytical framework the SSNIP test, applied in the context of a business that supplies services to two 'sides' of a market, with differing demand conditions.
- 2.149 This section presents a summary of the earlier findings and considers the potential interactions between the airline-facing and passenger-facing sides of the market and how these might influence the overall market within which Heathrow operates.

The supply of infrastructure to passenger airlines

- 2.150 Overall, in respect of the supply of services by Heathrow to airlines, the relevant product market for this assessment is the provision of infrastructure and infrastructure services, covering a broad range of aeronautical and non-aeronautical activities, including the landing and parking of aircraft, but also extending to include the provision of terminal space for premium services (such as business lounges) and the provision of infrastructure to allow for the handling of bellyhold cargo.
- 2.151 Heathrow operates in three overlapping geographic markets with regards to its various airlines, as these appear to vary depending upon the airline business model being considered. For the based network airlines, Heathrow operates in a geographic market no wider than Heathrow and, for some services, Gatwick. With regard to inbound carriers, the geographic market appears to extend to Europe for short-haul inbound carriers and further afield for the long-haul inbound carriers.

The supply of infrastructure to passengers

- 2.152 The relevant product market for assessing Heathrow's market power in respect of passengers is likely to cover a range of aeronautical and non-aeronautical services that are required for the reception, processing and boarding of passengers. This product is also likely to include a range of non-aeronautical services, such as the provision of some (but not necessarily all) retail activities and surface access to the terminals.
- 2.153 This passenger product market needs to be segregated into the services provided to connecting and surface passengers. The strength of demand characteristics of passengers travelling on short- and long-haul flights, and the demand characteristics of those travelling for business, might also

support a narrowing of the product market in these two dimensions. However, the market definition can be left open in this regard.

- 2.154 In respect of the geographic market, there appears to be a particularly strong case for distinguishing between two different geographic markets. The first is the market for the provision by airports of infrastructure and infrastructure services to surface passengers in the south east of England. The second is the market for the provision by airports of infrastructure and infrastructure services to connecting passengers in Europe.

Combining the airline and passenger-facing markets

- 2.155 The market(s) within which Heathrow operates is, therefore, characterised by passenger-facing markets that are relatively broad in nature, covering at least the south east of England for surface passengers, and including a number of European hubs for connecting passengers.
- 2.156 These broad passenger markets can be contrasted with the markets of varying geographic scope that appear to be relevant for the supply of infrastructure to airlines, with Heathrow's geographic market being no wider than Heathrow and, for some services, Gatwick when based network carriers are considered but further afield when considering Heathrow's inbound carriers.
- 2.157 Whilst these user groups (each being a 'side' of the market facing Heathrow) can individually exert competitive constraints on the airport, the interactions and interdependences between passenger airlines and airlines provide "two-sided" competitive constraints. Using the markets defined above, a number of inferences can be made regarding the nature of these competitive constraints on Heathrow.

Based carriers serving surface and connecting passengers

- 2.158 Due to the lack of available alternative airports, airlines that base their network operations at Heathrow would appear to be unable to respond to a price increase in such a way that would constrain the airport's pricing. As a result, it seems that any constraining response would need to come from the passengers who would be served by these airlines. The broad geographic market for surface passengers, covering at least the south east of England, would suggest *prima facie* that they could be willing and able to switch away from Heathrow if they faced an increased cost of flying from the airport. Connecting passengers would also appear to have scope for substituting another European hub airport for Heathrow. On the basis of the analysis of the relevant markets, it is conceivable that the switching responses by passengers may be able to constrain to a degree the pricing behaviour by Heathrow towards its based network carriers. The strength of this constraint is considered in the next chapter.

Inbound carriers serving surface and connecting passengers

- 2.159 In general, inbound carriers face a wider choice set of substitute airports than their based counterparts. However, as for based carriers, the combination of alliance-related network effects and the importance of connecting

passengers could potentially create substantial switching costs that would limit inbound airlines' ability to switch away from Heathrow. It is possible that the most marginal airlines at Heathrow are inbound carriers that do not carry a large proportion of connecting passengers on their flights. If this were the case, such airlines may be able to insulate more captive inbound carriers from an increase in airport charges. Though some competitive constraints could be exerted from certain inbound carriers, both surface and connecting passengers again appear to be able to potentially constrain Heathrow's pricing behaviour to these airlines.

Interactions between airline networks and passenger demand for Heathrow

- 2.160 Whilst the interdependence between passenger airlines and passengers could be a source of competitive constraint for Heathrow, it also means that the switching decisions of each user group are likely to be affected by those of other(s). Airlines offer services from Heathrow due to the strong potential demand from surface passenger catchment area and connecting passengers. In turn, passengers using Heathrow are attracted to the airport in large part by the frequency of services and the concentration of long-haul routes at the airport. Airlines can then find it economic to grow their network and offer new services when there is strong demand typically from both surface and connecting passengers. This creates a virtuous circle between the demand from both of these user groups at Heathrow, which is analogous to the alliance-related network effect at the airport.
- 2.161 The interactions between the passenger airlines and passenger 'sides' of an airport from which hub networks are operated can result in the airport being increasingly attractive to potential users, limit the willingness of airlines and passengers to switch away and, consequently, increase the market power enjoyed by Heathrow.
- 2.162 The above discussion has highlighted the potential sources of competitive constraints that Heathrow could face as a result of the interactions and interdependences of the airport's passenger airlines and passengers. However, the magnitude of each user group's switching costs needs to be analysed in order to reach a view as to the likelihood and extent of switching and, therefore, to assess the degree of market power enjoyed by Heathrow in light of its competitive constraints.

3. Factors contributing to Heathrow's market position

Introduction

- 3.1 This chapter considers Heathrow's market position, which is then used to support the CAA's overall assessment of the degree of market power enjoyed by the airport.
- 3.2 The previous chapter considered the market(s) in which Heathrow operates, with a particular focus on passenger airlines and passengers. This analysis highlighted the importance of understanding how passenger and airline choices affect the market power enjoyed by the airport, including how these two customer groups might interact to discipline (or not) the airport's conduct.
- 3.3 This chapter considers the evidence available on the strength of competitive constraints faced by Heathrow. In line with the CAA's *Guidance on the assessment of airport market power*⁴⁹, we will be considering the cumulative impact of competitive constraints arising from within and outside of the market(s) set out in the previous chapter.

Structure of this chapter

- 3.4 This chapter is structured in a number of sections, starting with a description of the size of Heathrow in its market. This is then followed by three sections focusing on the potential impact of customer switching on the airport's incentives; looking at airline switching, passenger switching and how these two forms of switching interact. Having analysed the interactions and interdependences of airlines and passenger switching, the airport's sensitivity to losses in passenger volumes is considered using critical loss analysis to examine Heathrow's incentives to raise prices.
- 3.5 This is then followed by sections that discuss the impact of capacity constraints (together with barriers to entry and expansion) on the airport's market position, and that consider the relevance of evidence on the airport's pricing and behaviour.
- 3.6 The final section explicitly considers how these factors might change over time, to affect the airport's market power going forward and reach an initial view on the degree of market power held by Heathrow.

Market shares

- 3.7 Market shares can provide a useful initial indication of market structure and potential market power, although they need to be interpreted in light of the market conditions and other evidence on the strength of competitive constraints faced by the airport. As noted in the *Guidance on the assessment of airport market power*, the fact that airports offer differentiated products and services complicates the analysis of market shares as these may not be an accurate representation of an airport's market power. Further, Heathrow and Stansted are jointly owned by BAA, which needs to be taken into account when considering the constraining impact of these airports' market

⁴⁹ CAA *Guidance on the assessment of airport market power* April 2011
<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

shares on each other. However, this is unlikely to change the observations drawn from market share analysis. Another complicating factor is that the airport faces potential competitive constraints from the choices made by different user groups, notably passenger airlines and passengers, which means that the market shares of each 'side' of the market need to be considered⁵⁰.

3.8 However, determining the approximate relative size of Heathrow in the markets it operates within provides a useful first step in understanding the likely market power of the airport. Reflecting the analysis in chapter 2, Heathrow operates in a number of related economic markets, some of which have a relatively narrow geographic scope, whilst others are very broad. The following analysis brings together analysis of Heathrow's relative market position reflecting these different scopes.

3.9 In order to consider the combined impact of airline and passenger behaviour, the following sections consider a number of airline-passenger segments, in light of the market definitions set out in the previous chapter. These are:

- Long-haul services carrying surface (O&D⁵¹) passengers;
- Short-haul services carrying surface (O&D) passengers; and
- Short and long-haul services carrying connecting passengers.

Long-haul services carrying surface passengers

3.10 Reflecting the importance of understanding both the passenger-facing and airline-facing aspects of the airport's operations, we first discuss market share metrics that relate to passenger airlines, before considering metrics relating to passengers. This is followed by a section considering the implications of the analysis.

Passenger airlines

3.11 Based on the market definition in chapter 2, it appears that Heathrow may operate in a narrow market, which is no wider than Heathrow and, for some services, Gatwick. In this respect, it is relevant to note that Heathrow had 455,000 air traffic movements in 2010, compared to 241,000 at Gatwick, which corresponds to a 65 per cent share for Heathrow of this market.⁵²

3.12 However, Heathrow may also face a degree of competitive discipline from airports further afield, including those outside of Europe. In particular, chapter 2 noted that those airlines that are able to switch away from the airport are likely to view airports serving major conurbations or those with existing networks as reasonably close substitutes. Table 2 shows that while Heathrow is a very large airport by a worldwide standard, its share of Air Transport Movements (ATM) indicates that it does not enjoy a particularly large share relative to its competitors.

⁵⁰ CAA *Guidance on the Assessment of Airport Market Power* April 2011 paragraph 4.5

<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

⁵¹ These are "Origin and Destination" passengers that originate from a surface location and fly from the airport to their end destination, and as a result do not connect between flights at Heathrow.

⁵² CAA Airport Statistics, 2010

Table 2 Top 50 airports by Air Transport Movement 2009

TOP AIRPORTS BY MOVEMENTS			
Rank	City	Airport Code	2009 Movements
1	Atlanta, GA	ATL	970,235
2	Chicago, IL	ORD	827,899
3	Dallas/Ft. Worth, TX	DFW	638,782
4	Los Angeles, CA	LAX	634,383
5	Denver, CO	DEN	607,019
6	Houston, TX	IAH	538,168
7	Paris, France	CDG	525,314
8	Las Vegas, NV	LAS	511,064
9	Charlotte, NC	CLT	509,448
10	Beijing, China	PEK	488,505
11	Philadelphia, PA	PHL	472,668
12	London, UK	LHR	466,393
13	Frankfurt, Germany	FRA	463,111
14	Phoenix, AZ	PHX	457,207
15	Madrid, Spain	MAD	435,179
16	Detroit, MI	DTW	432,589
17	Minneapolis/St. Paul, MN	MSP	432,395
18	New York, NY	JFK	416,945
19	Newark, NJ	EWR	411,607
20	Toronto, Canada	YYZ	407,352
21	Amsterdam, Netherlands	AMS	406,974
22	Phoenix, AZ	DVT	402,335
23	Munich, Germany	MUC	396,805
24	San Francisco, CA	SFO	379,751
25	Salt Lake City, UT	SLC	372,300
26	New York, NY	LGA	354,594
27	Miami, FL	MIA	351,417
28	Los Angeles, CA	VNY	351,285
29	Mexico City, Mexico	MEX	348,306
30	Boston, MA	BOS	345,306
31	Washington, D.C.	IAD	340,367
32	Memphis, TN	MEM	338,973
33	Tokyo, Japan	HND	335,716
34	Rome, Italy	FCO	324,497
35	Seattle/Tacoma, WA	SEA	317,873
36	Vancouver, Canada	YVR	313,984
37	Guangzhou, China	CAN	308,863
38	Orlando, FL	MCO	300,401
39	Long Beach, CA	LGB	297,079
40	Sydney, Australia	SYD	289,847
41	Hong Kong, CN	HKG	288,169
42	Shanghai, China	PVG	287,916
43	Istanbul, Turkey	IST	283,953
44	Dubai, UAE	DXB	281,175
45	Barcelona, Spain	BCN	278,965
46	Honolulu, HI	HNL	274,434
47	Jakarta, Indonesia	CGK	272,877
48	Washington, DC	DCA	272,146
49	Baltimore, MD	BWI	268,005
50	Ft. Lauderdale, FL	FLL	266,979

Source: Airports Council International

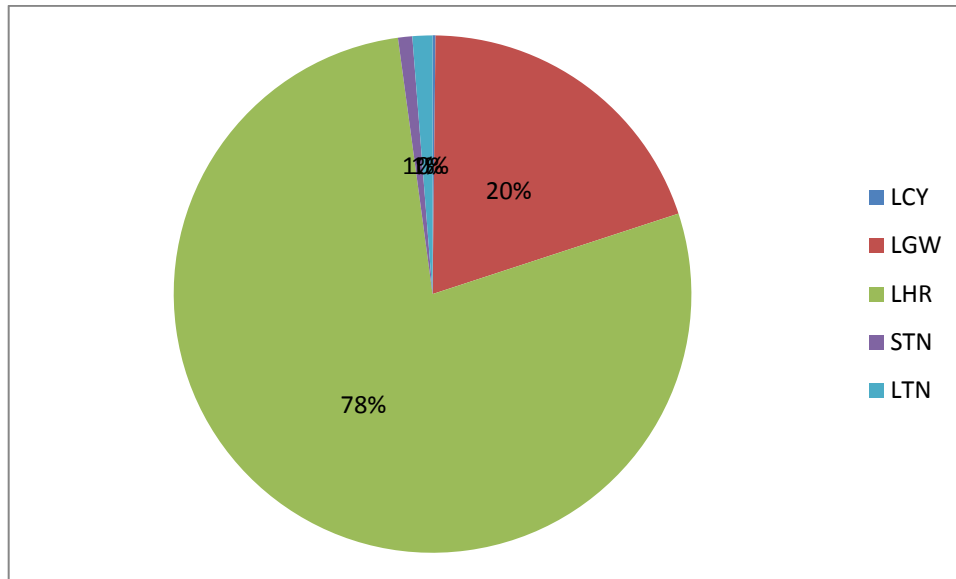
Passengers

- 3.13 For surface long-haul passengers, the relevant market has been defined as the market for the provision by airports of infrastructure and infrastructure services to surface passengers in the south east of England (although it appears that this market might also extend towards the west and north).
- 3.14 The market shares of the five London airports, the largest in the south east in terms of passengers⁵³, with regard to surface passengers on long-haul flights are shown in Figure 7. Heathrow has clearly the most significant market share, with 78 per cent of surface long-haul passengers, followed by Gatwick

⁵³ CAA UK Airports Market – General Context September 2011 Annex A
<http://www.caa.co.uk/docs/5/20110905%20Market%20Context-FINAL.pdf>

with 20 per cent. The other three airports (Stansted, Luton and London City) each have 1 per cent or less.

Figure 7 - Share of surface passengers on long haul flights for the five London airports 2010



Source: CAA Passenger Survey 2010

- 3.15 The European Commission's decision in *AKZO*⁵⁴ stated that a 50 per cent market share created a rebuttable presumption of dominance for an undertaking. Further, in *United Brands*⁵⁵, the Commission and the ECJ held that a firm with a market share in the 40 per cent to 45 per cent range "does not however permit the conclusion that [an undertaking] automatically controls the market. It must be determined having regard to the strength and number of the competitors."⁵⁶ The decision goes on to state that market share analysis should be taken together with other relevant evidence in assessing the extent of an undertaking's market power.
- 3.16 Geographically widening the market to airports across the UK, Heathrow's share falls to 57 per cent, although this is still significantly larger than the market shares of the second and third airports: Gatwick (15 per cent) and Manchester (13 per cent).
- 3.17 Evidence from the CAA's working paper on passengers' airport preferences⁵⁷ suggests that business passengers and those visiting friends and relatives (VFR) tend to have a strong destination preference, although for the latter cost is also important. This would suggest that they would be likely to switch only if a close substitute service at another airport were available. Additionally, business passengers, due to their time sensitivity, tend to have a frequency preference, which would suggest that they could face high switching costs due to the unavailability of high frequency service at an

⁵⁴ Case C-62/86 [1991] ECR I-3359, [1993] 5 CMLR 215 *AKZO Nobel v Commission* <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61986O0062:EN:NOT>

⁵⁵ Case 27/76 [1978] ECR 207 *UBC v Commission (United Brands)* <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61976J0027:EN:NOT>

⁵⁶ *Ibid* paragraphs 109 – 113.

⁵⁷ *CAA Passengers' airport preferences – Results from the CAA Passenger Survey November 2011* <http://www.caa.co.uk/docs/5/Passenger%20survey%20results%20-%20FINAL.pdf>

alternative airport. Heathrow's position may then be particularly strong with regard to these passengers.

- 3.18 Across the five major London airports, Heathrow has a 91 per cent and 84 per cent share of UK resident (outbound) business and VFR passengers respectively on long-haul flights, with Gatwick (7 per cent and 14 per cent) being the only other London airport with a significant share for either passenger type. When considering airports across the UK, Manchester has the second largest share of long-haul UK business (13 per cent) and VFR (12 per cent) passengers, while Heathrow (68 per cent and 62 per cent) is still the largest and Gatwick (5 per cent and 10 per cent) is the third largest.
- 3.19 For foreign resident (inbound) passengers on long-haul flights, Heathrow's share between the London airports is even greater. The airport accounts for the vast majority of inbound long-haul business passengers (93 per cent) and VFR passengers (88 per cent), while Gatwick has 6 per cent and 10 per cent respectively. Across UK airports, Manchester again has similar shares to Gatwick, with Heathrow being by far the largest.
- 3.20 In contrast to business and VFR passengers, CAA Passenger Survey evidence and EC and UK case law has found that holiday (non-time sensitive) passengers tend to be more flexible regarding their destination preference. Evidence from the CAA Passenger Survey also suggests that their airport choice may also be more strongly influenced by third party decisions⁵⁸.
- 3.21 These passengers are, therefore, more likely to be responsive to price. For UK resident (outbound) holiday passengers on long-haul flights, Heathrow (56 per cent) and Gatwick (41 per cent) both have large market shares for UK leisure long-haul passengers, when compared with the other London airports. These shares fall to 37 per cent and 26 per cent respectively when considering airports across the UK, with Manchester also having a significant share of 20 per cent. Heathrow (88 per cent) and Gatwick (10 per cent) also have the largest shares for foreign resident (inbound) passengers, when considering airports across the UK, with Manchester having a 4 per cent share.

Implications

- 3.22 The market share analysis for long-haul airlines and passengers highlights that whilst passengers may be able and willing to switch to use an alternative airport across potentially a wide geographic area, Heathrow is by far the largest UK airport and currently has a very substantial share of passengers on long-haul services overall, and in particular business and VFR passengers.
- 3.23 This analysis serves to highlight the particular importance of Heathrow in long-haul markets. As these long-haul services typically also serve a mix of

⁵⁸ CAA *Passengers' airport preferences – Results from the CAA Passenger Survey* November 2011 <http://www.caa.co.uk/docs/5/Passenger%20survey%20results%20-%20FINAL.pdf> paragraph 3.12, Case COMP/M.3280 Air France/KLM paragraph 19, COMP/M.5141 KLM/Martinair paragraph 134, COMP/M.3770 Lufthansa/Swiss.

connecting and surface passengers, the very strong position in long-haul is also likely to affect the airport's market position in markets for connecting passengers and, related to this, short-haul services (which feed long-haul services). Furthermore, to the extent that network effects are driven by the presence of long-haul services, the analysis of long-haul market shares highlights the potential for airlines to gravitate towards Heathrow, even if passengers would, in principle, travel to use another airport.

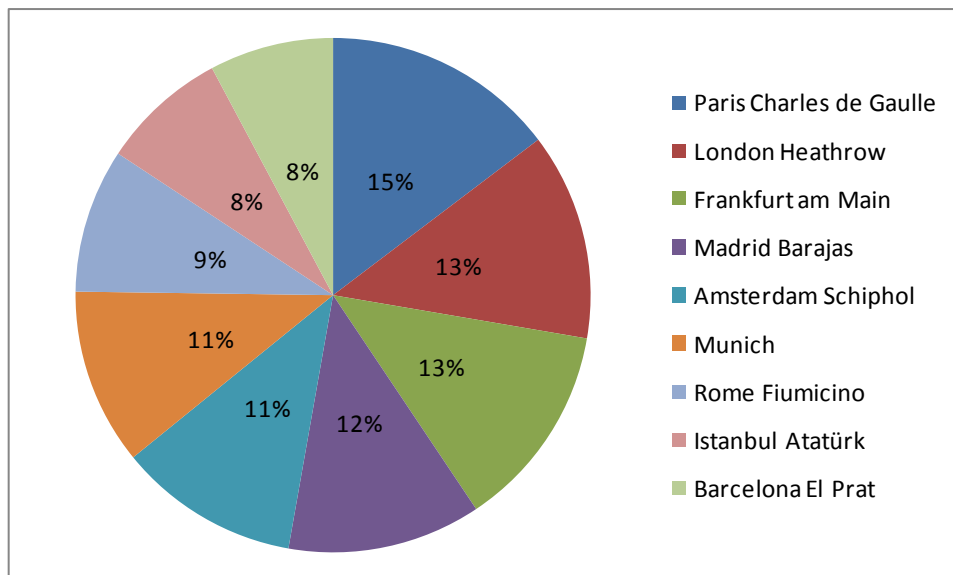
Short-haul flights carrying surface passengers

- 3.24 As was the case for long-haul passengers, this section now considers market share data relating to both the passenger-facing and airline-facing aspects of the airport's short-haul operations. This is followed by a section considering the implications of the analysis.

Passenger airlines

- 3.25 As discussed in chapter 2, the passenger airlines that operate short-haul routes from Heathrow appear likely to have a choice set that largely consists of either Heathrow and, for some services, Gatwick (for the based network carriers) or other major European airports. In respect of Heathrow and Gatwick, there are approximately double the ATMs at Heathrow (446,000) than at Gatwick (234,000). However, short-haul ATMs constitute 65% of Heathrow's total ATMs, compared to 88% of Gatwick's movements, which reflects the greater focus on long-haul services at Heathrow.
- 3.26 It is also useful to consider Heathrow's share of services compared to other European hub airports, reflecting the fact that few airlines at Heathrow operate a business model that focuses on O&D passenger flows. Instead, the majority of airlines operate network services, and rely on at least 10 per cent of their passengers connecting through Heathrow from another flight to increase their load factors.
- 3.27 Figure 8 considers the relative size of Heathrow and other major European hub airports, and shows the shares of 2009 Air Transport Movements between the largest European airports, based on the data in Table 2. The relatively even size of the nine largest airports in Europe highlights that Heathrow does not have a particularly high market share of the capacity relative to its European competitors.

Figure 8 Share of ATMs between the largest European airports 2009



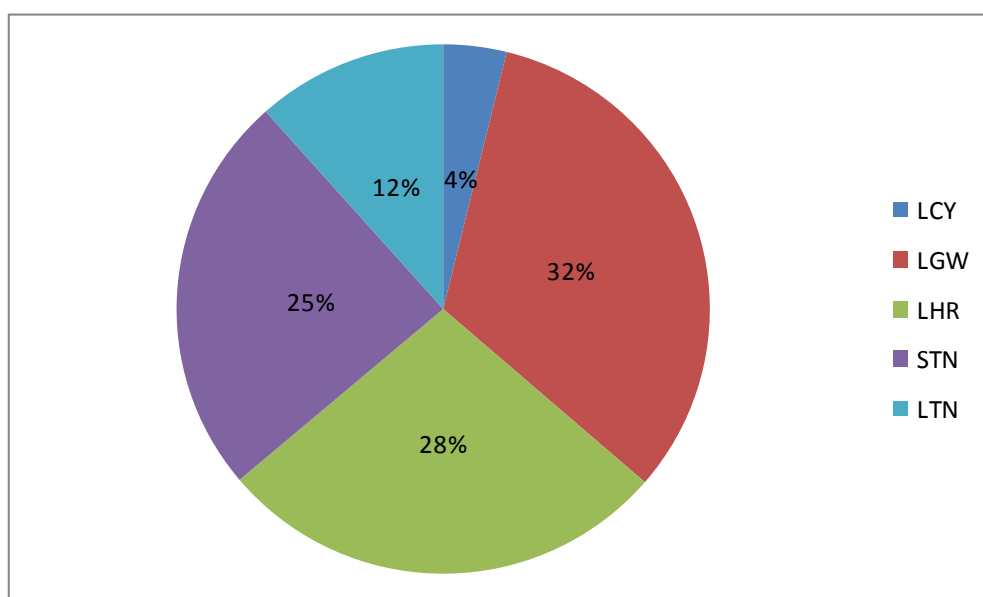
Source: Adapted from Airports Council International (see Table 2)

Passengers

3.28 Reflecting the focus of the passenger-facing market on the south east of England, this section considers the airport's size relative to the other London airports.

3.29 Figure 9 shows the market shares of the five London airports with regard to surface passengers on short-haul flights. In contrast to the market shares for long-haul passengers, Gatwick has a greater share (32 per cent) than Stansted (25 per cent), followed by Luton (12 per cent), London City airport (4 per cent) and Heathrow (28 per cent).

Figure 9 Share of surface passengers on short-haul flights for the five London airports



Source: CAA Passenger Survey 2010

3.30 Although the relative magnitudes are unchanged, these shares fall when a broader market is considered and airports across the UK are included, as Manchester (9 per cent), Edinburgh (6 per cent) and Birmingham (5 per cent)

also serve a large number of short-haul passengers. On this broad market definition, Heathrow's share of passengers is 15 per cent, while Gatwick has 18 per cent.

- 3.31 However, as with long-haul flights, business and VFR short-haul surface passengers are likely to have stronger destination preferences than others, and may be particularly important when understanding the market position of Heathrow, due to their lower sensitivity to price. In this context, for UK resident (outbound) short-haul passengers at the five major London airports, Heathrow has the largest share (45 per cent) of business passengers, followed by Gatwick (22 per cent), Stansted (15 per cent), Luton (10 per cent) and London City (7 per cent).
- 3.32 Considering airports across the UK, Heathrow's share falls sharply to 24 per cent, followed by Gatwick (14 per cent), Edinburgh (9 per cent) and Manchester (8 per cent). This shows that the market for short-haul business and VFR traffic is more evenly distributed than is the case for long-haul passengers, which is particularly focused on Heathrow. The shares for foreign resident (inbound) short-haul business passengers are similar, although Heathrow has a markedly higher share (37 per cent).
- 3.33 Turning to short-haul leisure passengers, Gatwick serves the most short-haul UK holiday passengers (53 per cent), followed by Stansted (21 per cent), Heathrow (13 per cent) and Luton (12 per cent), across London. On a UK-wide basis, Heathrow's share falls further to 5 per cent, while Gatwick (22 per cent) and Manchester (15 per cent) have the largest shares. However, for foreign resident (inbound) holiday passengers, Heathrow retains a particularly strong position, serving the largest proportions (35 per cent across London airports and 25 per cent across UK airports), followed by Stansted (31 and 22 per cent) and Gatwick (25 and 18 per cent).
- 3.34 Stansted (32 per cent) has the largest share of short-haul UK VFR passengers across the London airports, closely followed by Gatwick (31 per cent), Heathrow (19 per cent) and Luton (16 per cent). Heathrow's share falls to 10 per cent on a UK-wide basis, although the airport remains the third largest for short-haul UK VFR passengers. For foreign residents, Heathrow has a stronger position, and has the joint second largest share with Gatwick (approximately 25 and 18 per cent across London and the UK respectively), following Stansted (33 and 22 per cent).

Implications

- 3.35 Airlines operating O&D-oriented services from Heathrow are few in number, with the majority of short-haul services being offered as part of a network operation that relies on at least 10 per cent of passenger on a flight connecting to/from another service. Consequently, the scope for airlines to readily switch short-haul routes away from Heathrow appears limited, as it could adversely impact the profitability of long-haul routes.
- 3.36 However, when considering the airport's share of passengers, the picture is somewhat mixed. The airport accounts for a significant share of passengers

travelling to short-haul destinations, albeit that in certain segments Heathrow is not the largest airport (such as UK holiday and VFR passengers).

- 3.37 Furthermore, the airport's share of short-haul passengers is in marked contrast to its very strong position in long-haul markets. This suggests that the strength of the airport's market position in short-haul markets arises from the interactions between long-haul services and short-haul services – due to the network economics of airlines – rather than arising simply by virtue of the scale of the airport in short-haul markets.

Short-/long-haul flights carrying connecting passengers

- 3.38 We now turn to the size of Heathrow in markets relating to short and long-haul services carrying connecting passengers. As above, we consider both passenger-facing and airline-facing aspects of this market segment, before considering the implications of the analysis.

Passenger airlines

- 3.39 As discussed in chapter 2, Heathrow's supply of infrastructure and infrastructure services to certain airlines may well take place in a very narrow economic market, which could be no wider than Heathrow and, for some services, Gatwick.
- 3.40 In this narrow market, we can consider the relative size of the airports from an airline perspective by comparing the air traffic movements at each airport that relate to major networks. Whilst an approximation, one way to do this is to compare the Air Transport Movements (ATMs) at the two airports that are part of the three airline alliances. In 2010, airlines that are alliance members accounted for 75 per cent of Heathrow's ATMs, while only representing 20 per cent of ATMs at Gatwick, 18 per cent of which being operations by British Airways (14 per cent) and its oneworld partners. This strongly suggests that Heathrow is the London airport from which alliances prefer to operate, in part due to the available hub infrastructure. There may well be a strong degree of alliance-related network effects.

Connecting passengers

- 3.41 Connecting passengers are those who fly into Heathrow to change flights to their final destination airport. Their choice set therefore differs from that of surface passengers. For connecting passengers, the relevant market has been defined as the market for the provision by airports of infrastructure and infrastructure services to connecting passengers in Europe. Table 3 below shows the number of connecting passengers at the four major European hub airports.

Table 3 Connecting passengers at selecting European airports 2010

	Total passengers (millions)	Connecting passengers (millions)	Terminating passengers (millions)	% Connecting passengers	LUZ Population 2004 (m)
London Heathrow	66	24	42	36	12.3
Frankfurt am Main	53	28	25	52	2.5
Amsterdam Schiphol	48	21	27	43	1.5
Paris Charles de Gaulle	58	19	39	32	11.5

Source: Airports' websites, ATRS 2011 World Airport Benchmarking Report, and Eurostat

Notes: LUZ = Large Urban Zone, Paris' population refers to 2004

3.42 As the figures in the third column show, the share of connecting passengers between the four airports is relatively even, with each hub having approximately a quarter of the total. As connecting passengers might be expected to be somewhat indifferent between connecting at different airports – and instead be focused on the overall journey time – Heathrow would appear to be in a relatively competitive European market for connecting passengers. The shares would be slightly lower if other, smaller hub airports (e.g. Madrid, Munich and Zurich) were included. However, as is discussed below, there is some evidence to suggest that connecting passengers at Heathrow have a particular preference to use the airport and might not, in fact, be indifferent between European hubs.

3.43 The above figures focus on overall connecting passengers. However, given the different origins and destinations of connecting passengers, not all of these passengers will view Heathrow and other European hubs as being close alternatives. One way to understand better the impact of origin/destination is to consider the flow of connecting passengers through Heathrow between different geographic areas. Table 4 below shows the main intercontinental connecting passenger flows at Heathrow.

Table 4 Proportion of Heathrow connecting passengers by world region pair

	Domestic	Europe	North America	Rest of World
From Domestic	0%	6%	8%	10%
From Europe		3%	31%	22%
From North America			0%	20%
From Rest of World				1%

Source: CAA Passenger Survey 2010

3.44 Over 60 per cent of connecting passengers at Heathrow fly to or from a European (i.e. short-haul) destination. The greatest proportion (31 per cent) of connecting passengers travel via Heathrow between a European destination and a North American destination. Other large flows are from Europe to the Rest of the World (22 per cent), and from North America to the Rest of the World (20 per cent). There is also a smaller, but still significant, flow between domestic UK destinations and other destinations. It is clear that short-haul routes are central to the networks of many airlines operating from Heathrow.

Implications

- 3.45 For some airlines, the relevant market may be particularly narrow. For these airlines, Heathrow may well supply its infrastructure and infrastructure services to passenger airlines in a market no wider than Heathrow and, for some services, Gatwick. However, the far greater concentration of alliance member airlines at Heathrow would suggest that the airport is the focus of their operations in London and the UK, making them perhaps less likely to switch away due to the loss of alliance-related network effects.
- 3.46 The analysis of passenger flows highlights the importance of European short-haul routes. This might imply that these short-haul routes are particularly important to airline networks, and make the switching of these routes costly, due to the loss of network effects and impact of overall network profitability. Consequently, the importance of European short-haul routes suggests that there may be significant competition on these services between Heathrow and other major European hub airports.
- 3.47 Again, this suggests that whilst Heathrow has a significant share of connecting passengers, its share of passengers does not, in itself, highlight a particularly strong market position. Instead, the market power enjoyed by the airport in markets for connecting traffic is likely to arise from the relatively limited options available to the airlines at Heathrow that fly connecting passengers and from the linkages between connecting passengers and the very strong position that the airport enjoys in long-haul markets.

Evolution of market shares

- 3.48 The above analysis focuses on recent data on Heathrow's market position. It is useful to supplement these snapshots of different market shares and to consider the evolution of these market shares over time. This can reveal further information regarding the stability of the airport's market position.
- 3.49 One useful metric for considering the stability of airport market shares is to consider aggregate data on air traffic movements and passenger numbers. Table 5 below shows the percentage change in ATM and passengers since 2007 for each London airport.

Table 5 Percentage change in ATMs and Passengers

Year	LHR		LGW		STN		LTN		LCY		Total LON	
	ATM	pax	ATM	pax	ATM	pax	ATM	pax	ATM	pax	ATM	pax
2008	-1%	-1%	-1%	-3%	-7%	-6%	3%	3%	9%	12%	-1%	-2%
2009	-3%	-1%	-4%	-5%	-12%	-11%	-12%	-10%	-20%	-14%	-7%	-5%
2010	-2%	0%	-5%	-3%	-8%	-7%	-9%	-4%	-10%	-1%	-5%	-2%
2007-2010	-6%	-3%	-10%	-11%	-25%	-22%	-18%	-12%	-22%	-5%	-12%	-9%

Source: CAA airport statistics

- 3.50 Overall, traffic has fallen between 2007 and 2010 by 12 per cent and 9 per cent by ATMs and passengers respectively across the five major London airports. However, it is the way in which traffic has fallen across the airports that is informative as to their respective market positions. Compared to the

four other London airports, Heathrow has experienced the lowest overall fall in both ATM and passengers between 2007 and 2010.

- 3.51 This suggests that Heathrow is somewhat insulated from the impact of traffic fluctuations, relative to the other major London airports. Reflecting this, a number of airlines highlighted the importance of operating from Heathrow, and the higher yields that are available from the airport. These factors might explain the relative strength of the airport's market position, but would also suggest that the airport enjoys a relatively strong and stable market position, when measured at an aggregate level.

The impact of passenger and airline switching

- 3.52 The previous section considered a number of indicators of Heathrow's size in the markets it operates in. This section builds on this analysis and considers the available evidence on the degree to which different passengers and airlines are able to switch away from Heathrow in response to an increase in prices above the competitive level, and the impact that such switching would have on the profitability of the airport. An introduction of the main issues related to airline switching and analysis of route churn is available in the Annex to this document.
- 3.53 The following section is structured in three main sub-sections, which consider the evidence on passenger airline switching, passenger switching and the sensitivity of the airport to losses of airline business and passengers. There is a final section that brings this material together into a summary of the competitive constraints on Heathrow resulting from the interactions of and interdependences between these user groups.

Passenger airline switching

- 3.54 Switching costs affect an airline's willingness and ability to switch away from Heathrow in response to a price rise. To the extent that airlines face different levels of switching costs, this will tend to result in differing degrees of responsiveness to price changes. In order to understand the overall impact of airline switching on the airport it is important to consider the impact of airlines that are more able to switch, and whether these 'marginal' airlines protect those less able to switch away from the airport. In this context, it should be noted that we are interested in whether airlines can reduce their use of Heathrow and its impact on airport profits, rather than considering whether an airline is able to remove all of its business from the airport.
- 3.55 The discussion of market definition in chapter 2 discussed how the level of airlines' switching costs are likely to be influenced by the impact on profitability of losing network effects when individual services are switched away from Heathrow. One factor that supports these network effects is the extent of alliance membership and code-share agreements between airlines operating at Heathrow, which encourage passengers to connect between services and increase airline network effects at the airport.
- 3.56 This section begins by considering the extent of airline alliance membership at the airport, and continues by analysing the switching costs involved for

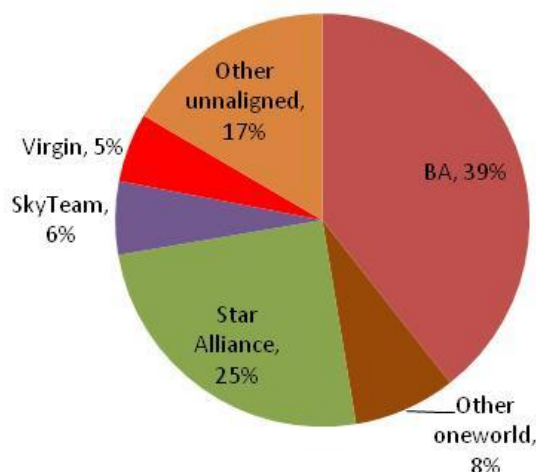
short haul and long-haul services. Other factors that contribute to the switching costs faced by passenger airlines at Heathrow are then considered.

Airline alliances at Heathrow

3.57 An important factor contributing to network effects at Heathrow, compared to other airports in the south east of England, is the prominence of airline alliance membership, which facilitates connections by passengers between individual airline services. Airlines in alliances undertake a range of different forms of cooperation to create the largest possible worldwide joint network. This cooperation can take many forms, ranging from standard code-share agreements and cooperation on Frequent Flyer Programmes and lounge access, to higher levels of cooperation to enhance the benefits of the alliance. However, airlines that are members of an alliance may still compete with each other, as they vary greatly in their degree of integration.⁵⁹

3.58 Figure 10 below shows the airline shares of the total number of passengers at Heathrow (aggregating both surface and connecting passengers), according to their alliance affiliation⁶⁰. British Airways⁶¹, a based network carrier member of oneworld, has the largest share (39 per cent), while oneworld overall has a 47 per cent share of passengers at Heathrow. Star Alliance, of which the Lufthansa group of airlines is a member, has the second largest share of passengers, while the Sky Team alliance has only 6 per cent. Virgin, a long-haul based carrier has a share of 5 per cent, while a number of other unaligned airlines make up the remainder. It is clear that alliance membership is an important facilitating factor in taking advantage of network effects, which suggests that moving to an airport with fewer alliance partners would increase switching costs.

Figure 10 Share of Heathrow passengers by alliances 2010



Source: CAA airport statistics

⁵⁹ For further detail, see the joint report by the European Commission and U.S. Department of Transportation: *Transatlantic Airline Alliances: competitive issues and regulatory approaches* http://ec.europa.eu/competition/sectors/transport/reports/joint_alliance_report.pdf

⁶⁰ Figure 1 sets out the shares of individual airlines.

⁶¹ This share does not include American Airlines or Iberia, who are joint venture partners with British Airways.

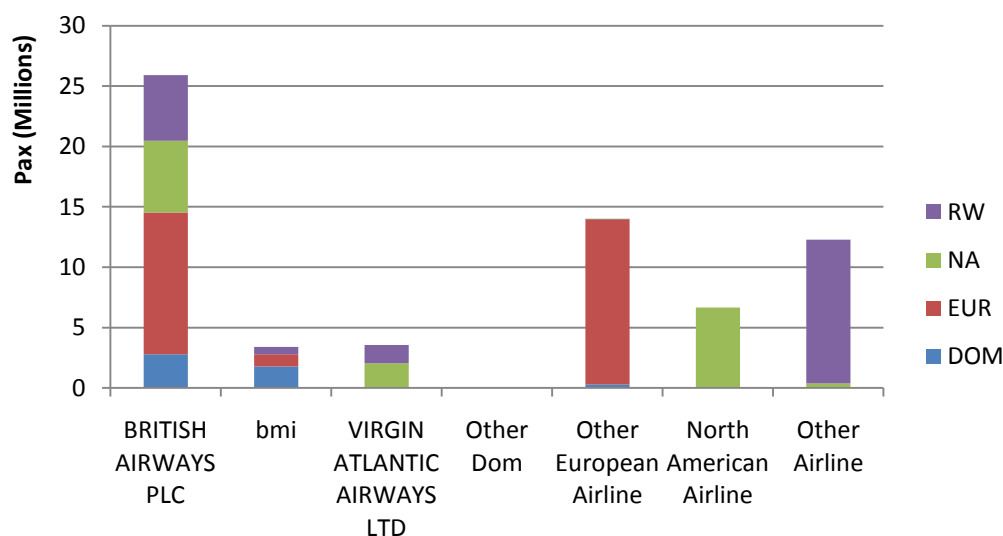
- 3.59 The significance of these alliances is one factor that explains the significant proportion of airlines that benefit from connecting passengers. At Heathrow, 75 out of 93 airlines (covering 94 per cent of Heathrow's total passengers) have at least 10 per cent of their passengers connecting between flights at the airport. [X] The presence of alliances and code shares, together with the significance of connecting passengers to the majority of services at the airport, highlights the importance of network traffic at Heathrow to airlines' strategy.
- 3.60 This has implications for airline switching costs. In particular, the existence of network effects means that the decision to switch one service away from Heathrow will result in the loss of revenue from that service but also results in adverse revenue impacts to other services. More generally, the removal of a service from an airline's network of services will reduce the range of connections offered by the network to passengers. Airlines that enjoy significant benefits from network operations will, therefore, tend to face higher switching costs than similar airlines operating on a point-to-point basis.
- 3.61 As noted above, it is important to consider whether there are significant numbers of airlines that are more able to switch away from the airport. In this respect, at Heathrow the 18 carriers who each carry less than 10% connecting passengers from Heathrow would *prima facie* appear to be the most 'marginal' airlines, and be the mostly likely to switch away from the airport.

Impact of short-haul route switching

- 3.62 Chapter 2 discussed the factors that appear to contribute to the switching costs faced by the airlines at Heathrow. This highlighted the switching costs faced by airlines operating long-haul services, in part due to the additional infrastructure requirements of these services, including the costs incurred by airlines in providing premium services, and the importance of connecting passengers to many of these services. This suggests that long-haul services might not represent the 'marginal' services at Heathrow and not be the services most likely to respond to a change in prices at the airport.
- 3.63 This section considers the potential for short-haul services to switch away from Heathrow, and whether there are particular factors that might reduce the degree to which these services might switch. This is particularly interesting in light of the significant route overlaps that exist between Heathrow and other London airports.
- 3.64 Analysis of connecting passenger flows at Heathrow shows that the European (including domestic UK) short-haul routes are important to over half of the current connecting passengers. This suggests that many of these short-haul services might be important for the overall profitability of airlines' networks – by representing important sources of feeder traffic – and this might contribute to airline switching costs for these routes.
- 3.65 If we first consider the airlines that operate short-haul services at Heathrow. Figure 11 shows that European routes (including UK domestic routes) at

Heathrow are operated by European airlines. European services from Heathrow are not operated by the North American airlines, or those from other regions of the world. Instead, these airlines principally operate routes to North America and to the Rest of the World, respectively.

Figure 11 Passengers carried by airlines at Heathrow to by destination type



Source: CAA airport statistics

- 3.66 Indeed, there is significant concentration in the services operated to European destinations from Heathrow, with British Airways having by far the largest share of these passengers (44 per cent), with BMI also operating a significant number of domestic and short-haul services.
- 3.67 Since British Airways and BMI are both based network carriers, and members of alliances, these airlines are likely to suffer a significant loss of profitability across their networks from switching individual short-haul services away from the airport. These services are not, therefore, particularly likely to be responsive to a 5-10 per cent increase in airport charges, particularly when the switching costs associated with network effects are combined with the cost structures of these airlines (where airport charges are a lower proportion of overall costs than for low cost, point-to-point short-haul carriers).
- 3.68 Three of the five next largest airlines – each of whom accounts for less than 10 per cent of Heathrow’s passengers – are inbound airlines that are members of Star Alliance. These airlines mainly operate these European routes to transport feeder traffic to/from their hub airports in Europe. Although these airlines may face lower switching costs than based carriers, the likely large commercial advantage gained from operating short-haul services to and from Heathrow would still constitute an important cost in switching away from the airport, in particular as for a hub airport to have a compelling offer to some passengers (such as for corporate clients) a frequent connection to all of the major European capitals is likely to be particularly important.
- 3.69 A number of member airlines of Sky Team also operate short-haul routes from Heathrow, as set out in Figure 12. Of the largest 10 carriers of short-

haul passengers, only Aer Lingus is not a member of an alliance, and yet it still has code-share agreements with many other airlines who are members of alliances at Heathrow, which would nevertheless create network-related switching costs.

Figure 12 Top 10 airlines serving European destinations in terms of passengers

BRITISH AIRWAYS PLC	11,762,909.00	44%	ONE
LUFTHANSA	2,380,366.00	9%	STAR
AER LINGUS	1,811,720.00	7%	unaligned
SAS	1,477,421.00	6%	STAR
bmi	1,005,143.00	4%	STAR
SWISS AIRLINES	873,943.00	3%	STAR
ALITALIA (CAI)	798,095.00	3%	SKY
IBERIA	715,643.00	3%	ONE
KLM	683,498.00	3%	SKY
AIR FRANCE	674,302.00	3%	SKY

Source: CAA Airport Statistics 2010

- 3.70 Additionally, the loss of yield resulting both from switching away a short-haul route to the next-best alternative and the loss of revenue across the network could vary according to the maturity of an airline's network. A network carrier with a mature network may be able to redeploy an aircraft or route to a number of different airports from which it already operates. For example, British Airways could potentially move a route or aircraft to Gatwick, and avoid the switching costs associated with opening up a new base. It may also be possible to vary the frequencies served to different destinations, and avoid the costs associated with launching a new service. This might in some cases reduce switching costs and also reduce the change in yield between the Heathrow service and the alternative, as the alternative airport may deliver some network benefits to the airline. By contrast, an airline with a less mature (or smaller) network may need to open a new service on which to redeploy its aircraft, which could lead to a potentially greater loss of yield as the airline may need to establish a new service, thereby incurring additional costs in establishing a new route.
- 3.71 The potential for the airlines at Heathrow to switch to use an alternative airport can be assessed by considering how many of the airlines at Heathrow already operate from other airports in the UK and in the London area. The latter is particularly relevant to the extent that switching to an alternative airport serving the same geographic area would reduce the need for an airline to market its alternative services, reducing the costs of switching away from Heathrow.
- 3.72 The analysis set out in Table 6 considers this issue, by setting out the number of airports that European carriers operate to/from, in Great Britain and at London airports. This shows that (non-UK) European airlines – who principally serve European destinations from Heathrow – appear to have considerably greater scope than the based network airlines to switch to another airport in Great Britain. For example, half of these European airlines

also operate from at least one other non-London airport, with one third operating from at least one other London airport.

Table 6 EU inbound carriers operating at GB airports 2010

	number of airlines	airlines' share of LHR in terms of pax	airlines with <10% connex pax @ LHR		airlines with <15% connex pax @ LHR		airlines with <20%
			number of airlines	airlines' share of LHR in terms of pax	number of airlines	airlines' share of LHR in terms of pax	number of airlines
Total number of airlines at LHR	90						
"Home" carriers (BA, BD, VS) at LHR	3	50%					
European airlines at LHR	31	21%					
EU airlines also serving	at least one other LON airport	10	7%				
	at least one other non-LON airport	15	15%				
	at least one other LON and non-LON airport	6	6%				
	at least one other GB airport	19	17%	3	2%	6	6%

Source: CAA airport statistics and CAA Passenger Survey

Note: Airlines with fewer than 10,000 passengers at an individual airport were eliminated from the analysis

3.73 The ability of these inbound short-haul airlines to switch between airports is also facilitated by the more even distribution of short-haul surface passengers across airports in the South East of England (when compared to the concentration of long-haul services at Heathrow) and the relatively small reliance on connecting passengers. This would suggest that the airlines might incur lower switching costs in terms of the adverse impact on load factors (and yield). However, whilst there may be a degree of flexibility on the part of these carriers between the London airports, the fact that many inbound passengers will ultimately be travelling to destinations within Greater London will discourage switching to non-London airports.

3.74 The above analysis suggests that, for the majority of both based and inbound airlines operating short-haul services at Heathrow, switching even their most marginal short-haul routes is likely to incur switching costs relating to the impact on airline networks. These costs are likely to be particularly high for the airlines based at Heathrow, and might be somewhat lower for those airlines with existing operations at other London airports. The importance of airline alliances to the majority of the airlines flying short-haul services at Heathrow also suggests that even the most marginal services are likely to face higher switching costs than those associated with low cost, point-to-point services.

The impact of long-haul surface passengers on airline switching

3.75 This section considers the characteristics of long-haul surface passengers. These passengers travel to the airport by surface – rather than arriving on a connecting flight – and so tend to originate from within the airport's local catchment area. The potential importance of these passengers to the airport's overall market position is highlighted in the market share analysis, which shows that 78 per cent of long-haul surface passengers originating from the Greater London area fly from Heathrow. We consider below the impact that these passengers' characteristics might have on the switching costs faced by long-haul carriers at Heathrow.

- 3.76 Figure 11 above shows that there is a significant impact of carrier nationality on the long-haul routes that are flown. For example, North American routes are operated by British Airways, Virgin and the North American carriers, while the three UK carriers and other “Rest of the World” airlines serve destinations in the “Rest of the World”. This is perhaps not surprising, given the presence of a number of air service agreements that restrict the nationality of carriers offering services – a feature of the UK-US agreement, until it was replaced by the EU-US air services agreement.
- 3.77 Table 7 below shows the share of carriers of different origins and their operations across the airports in Great Britain. Airlines from outside the EU carry 29 per cent of Heathrow’s passengers, almost exclusively on long-haul flights. Further, connecting passengers constitute at least 20 per cent of the passenger base of 46 out of the 56 non-EU airlines operating at Heathrow. This highlights the importance of airline networks to these services – a factor that is likely to increase switching costs for these carriers.
- 3.78 The table also shows the limited extent to which these carriers already operate from another London and/or GB airport. Overall, only 12 per cent of Heathrow’s passengers are served by a non-EU airline that also serves at least one other airport in Great Britain, and only 5 per cent of Heathrow passengers are served by a non-EU airline operating from another London airport. This would suggest that the scope for a non-EU airline to switch part of its operation to an airport in Great Britain from which it is already operating is quite low, in part due to the existing concentration of long-haul passengers and connecting passenger traffic at Heathrow⁶². This implies that switching to another airport in Great Britain (or in the south east of England) could involve relatively large costs, such as new capital investments and new route marketing costs.

Table 7 Non-EU inbound carriers operating at GB airports 2010

	number of airlines	airlines' share of LHR in terms of pax	airlines with <10% connex pax @ LHR		airlines with <15% connex pax @ LHR		airlines with <20%
			number of airlines	airlines' share of LHR in terms of pax	number of airlines	airlines' share of LHR in terms of pax	number of airlines
Total number of airlines at LHR	90						
"Home" carriers (BA, BD, VS) at LHR	3	50%					
European airlines at LHR	31	21%					
Overseas airlines at LHR	56	29%					
Overseas airlines also serving	at least one other LON airport	8	5%				
	at least one other non-LON airport	12	11%				
	at least one other LON and non-LON airport	5	4%				
	at least one other GB airport	15	12%	5	2%	7	2%

Source: CAA airport statistics and CAA Passenger Survey

Note: Airlines with fewer than 10'000 passengers at an individual airport were eliminated from the analysis

- 3.79 A further consideration is the impact that switching away from Heathrow might have on airline yields, which is likely to be affected by the extent to

⁶² [3<]

which airlines are able to attract premium traffic to their services. Table 8 compares the shares of premium passengers at the five London airports.

Table 8 London airport passengers by ticket type

	LHR	LGW	STN	LTN	LCY	Grand Total
First+Business	5%	1%	0%	0%	7%	3%
P Economy	4%	1%	0%	0%	4%	2%
Economy Flexible	3%	0%	0%	0%	7%	1%
Economy	88%	98%	100%	100%	82%	94%

Source: CAA Passenger Survey 2010

- 3.80 This pattern of premium passengers suggests that airlines switching long-haul routes to other existing airports are likely to face a considerable loss of passenger yield. Considering the five major London airports, aside from the business-focused operations at London City, Heathrow has by far the largest proportion of passengers (12 per cent) flying on premium tickets and, reflecting its size, by far the largest number of premium passengers. The relocation of long-haul services from Gatwick to Heathrow, following the implementation of the EU-US air services agreement, illustrates the commercial benefits to airlines from operating at Heathrow – particularly in light of the prices paid for Heathrow slots to support these switches.
- 3.81 Another factor that appears likely to increase switching costs is the dense population in the airport’s catchment, and its relative wealth per capita, which may well result in a greater propensity to travel and contribute to higher yields for airlines. The CAA has also been told that there are reputation/marketing barriers to switching from Heathrow to another London airport, as inbound passengers’ awareness of other London airports acts as a barrier to attracting passengers to fly to alternative airports.
- 3.82 The above discussion strongly suggests that airlines operating long-haul routes are likely to face large switching costs when considering switching services away from Heathrow, both from their reliance on connecting feeder traffic and the importance of network effects, and the factors that concentrate surface passengers at Heathrow.

Other switching costs

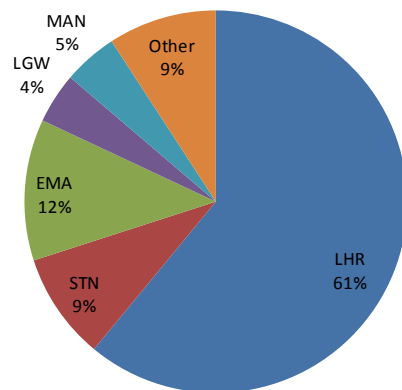
- 3.83 The previous section focused on the switching costs faced by passenger airlines relating to alliances and network effects, and the switching costs faced by airlines when looking to switch a short- or long-haul service away from Heathrow.
- 3.84 This section considers a number of other switching costs:
- the role of bellyhold cargo;
 - airline investments at Heathrow; and
 - staff costs.

Importance of bellyhold cargo

3.85 Passenger airlines at Heathrow typically transport cargo in the bellyhold of aircraft, particularly on long haul flights, which can significantly increase the profitability of a route, or make it sustainable, as noted in paragraph 2.37 on market definition.

3.86 Figure 13 shows that Heathrow has 61 per cent of the cargo tonnage in the UK, which is handled almost entirely as bellyhold cargo. In contrast, cargo at East Midlands and Stansted is transported on mainly cargo-only services.

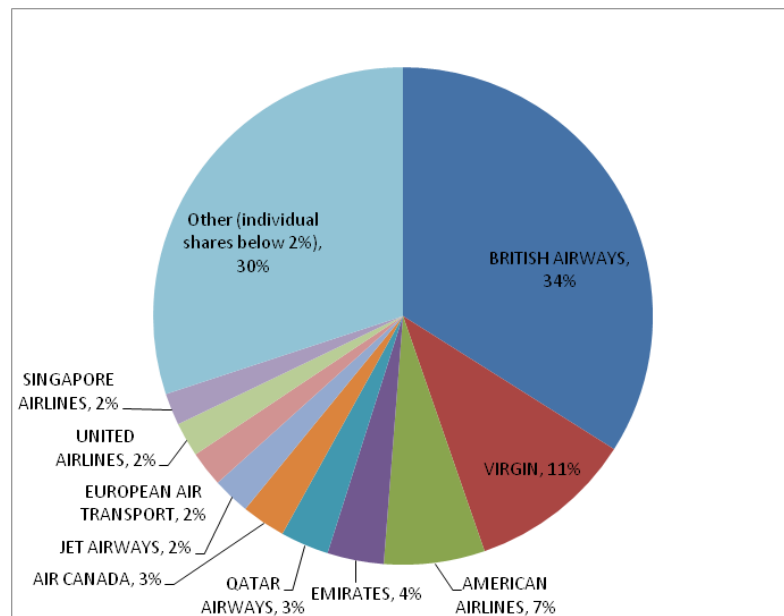
Figure 13 Airport shares of UK cargo tonnage 2010



Source: CAA Airport Statistics 2010

3.87 Figure 14 shows which airlines carry the largest percentage of Heathrow's cargo tonnage. British Airways carries the most (34 per cent) cargo on services to and from Heathrow, followed by Virgin (11 per cent) and American Airlines (7 per cent).

Figure 14 Share of Heathrow cargo tonnage by airline 2010



Source: CAA Airport Statistics

3.88 As the above figure illustrates, a large number of the carriers handling between 2 and 4 per cent of Heathrow's cargo operate exclusively long-haul, with the exception of European Air Transport, a cargo-only carrier. Airlines

operating short-haul routes to and from Heathrow, by contrast, tend to carry much less bellyhold cargo. Together with Figure 11, this evidence shows that bellyhold cargo is carried principally by carriers operating long-haul routes to and from Heathrow.

- 3.89 Not only does Heathrow have by far the largest share of cargo tonnage in the UK, it commands a premium on air cargo, as a top 10 global cargo gateway and the UK's main Express centre. [X]
- 3.90 This evidence supports the view that there are strong commercial barriers to bellyhold cargo switching away from Heathrow and that the premium achieved by carriers at Heathrow adds to the switching costs of passenger airlines. Indeed, these switching costs, in the form of lower cargo yields, would also affect a carrier relocating capacity to Gatwick. The impact of these switching costs will vary across different routes, reflecting the differing cargo volumes carried. [X]
- 3.91 Consequently, whilst it may not be physically difficult for cargo operations to switch away from Heathrow, since passenger airlines commonly outsource these operations to cargo-handling agents, the significant losses in air cargo feed, and the premium yield at Heathrow, appear likely to be a significant additional switching cost faced by passenger airlines at Heathrow. Consequently, the lower revenues and direct costs of switching cargo away from Heathrow will tend to increase switching costs, particularly for airlines operating long-haul services at Heathrow.

Airline investment at Heathrow

- 3.92 As discussed in chapter 2, the airlines at Heathrow predominantly offer a full-service, differentiated service to passengers, which includes the provision of premium services to passengers. Reflecting this, the airlines at Heathrow typically incur significant costs at the airports from which they operate, to deliver a service level that matches their brand. This means that these airlines incur (largely sunk) costs, the replication of which at another airport would create switching costs.
- 3.93 In general, based carriers tend to have greater infrastructure investment at an airport than non-based airlines. British Airways has stated that it has "sunk very large investments at Heathrow"⁶³, including £1billion for maintenance facilities, £800m for a world cargo terminal, bespoke facilities at Terminal 5, and offices⁶⁴. BMI has also given examples of substantial investments at Heathrow⁶⁵. [X] Though these infrastructure investments are significant, the extent to which they are sunk would depend on how specialised they are to a particular airline's operations. The level of *sunk* investment would then be the difference between the initial investment and

⁶³ BA response to issues statement in Competition Commission *BAA airports market investigation* http://www.competition-commission.org.uk/assets/bispartners/competitioncommission/docs/pdf/inquiry/ref2007/airports/pdf/issu es_statement_response_ba.pdf

⁶⁴ Ibid paragraph 2.3

⁶⁵ Supplementary submission to the complaint by British Midland International Limited [against Heathrow Airport Limited] under section 41 of the Airports Act 1986 <http://www.caa.co.uk/docs/5/rpg2011/bmisation41complaint.pdf>

the revenue from the infrastructure's potential sale. In this respect, it is relevant that many of the facilities are extensively branded, and many are tailored to individual airlines. It is also relevant that whilst the cost of these facilities would need to be incurred when an airline is commencing operations from a new airport, unless the airline withdrew completely from Heathrow, it may be necessary to maintain the facilities at a similar scale to that at present. Indeed, the CAA has seen evidence that indicates the nature and extent of investments that might be needed to attract a full service carrier to operate from a new airport base.

- 3.94 Although inbound carriers may not have invested as heavily at the airport, they may nevertheless have invested in some infrastructure such as premium lounges and other passenger-facing services. For example, Qatar has recently opened a dedicated premium lounge at Heathrow.⁶⁶
- 3.95 Overall, therefore, the capital investments incurred by airlines when they commence operations at a new airport are likely to act as a significant constraint on switching away from Heathrow, particularly for based carriers switching to an airport at which they do not have a significant existing operation.

Staff costs

- 3.96 A common cost of airport switching for all airlines operating from Heathrow would be the cost of relocating staff, if the airline moved its operations to an airport a considerable distance away. Staff costs can be a significant proportion of some carriers' costs. As shown in Figure 4, BA's staff-related costs account for a third of its overall cost base, although the corresponding figure for Virgin is lower at 22 per cent.
- 3.97 A number of factors can affect airline staff costs and how these might be affected by switching capacity between airports, including the flexibility of the terms of employment, such as the costs associated with staff relocation and redundancy. In general terms, however, the staff costs incurred when switching services between airports are likely to be lower when services are moved between near-neighbouring airports. For example, based airlines switching services to Gatwick might be able to retain a number of the staff involved.
- 3.98 Further, the staff costs incurred when an inbound carrier switches staff away from Heathrow are likely to be somewhat lower than for a based carrier. Indeed, there may not be any significant costs involved in switching between different destination airports, as crew remain employed at the same (overseas) airport.

Airline buyer power

- 3.99 The previous section considered the switching costs faced by airlines that might consider reducing their use of Heathrow; costs that would reduce the ability of the airlines using Heathrow to discipline the airport and prevent it from raising prices above the competitive level. This section discusses the

⁶⁶ For more details see: <http://www.qatarairways.com/global/en/lhr-lounge.page?iid=ALL6112112139>

role that airline buyer power might play in reducing Heathrow's market power. The potential role of airline buyer power was discussed in the CAA's *Guidance on the Assessment of Airport Market Power*.⁶⁷

- 3.100 Airlines, in principle, can find themselves in a sufficiently strong bargaining position to constrain an airport's behaviour through their countervailing buyer power. This is, in part, influenced by airlines' switching costs, but also by the importance of the airline to the airport and vice-versa, which affects the relative bargaining strength of the two parties, and whether an airline has a credible threat to switch away.
- 3.101 Table 9 below shows the relative importance of the airport to the based carriers in terms of their total passengers, and the airlines' importance to the airport in terms of its total passengers.

Table 9 Relative importance of airlines and Heathrow to their respective operations 2010

Airline	Share of airline's passengers who use Heathrow (%)	Share of Heathrow's passengers accounted for by the airline (%)
British Airways	78	39
Virgin	66	5
BMI (mainline)	100	5

Source: CAA airport statistics 2010

- 3.102 It is clear that different carriers are in a different position in terms of potential airline buyer power. British Airways flies 78 per cent of its passengers to/from Heathrow, which reflects the fact that the airport is BA's principal hub. These passengers account for 39 per cent of Heathrow's passengers. This suggests that the airline is more reliant on the airport than vice versa, although its network may be important to Heathrow's operations, and has very limited, if any, possibilities of relocating its network. Further, although BA is Heathrow's largest airline (by some margin) and accounts for a large proportion of its passengers, the excess demand for capacity at Heathrow is such that should BA significantly reduce its use of the airport there would likely be a degree of 'backfill' of any spare capacity, as other airlines take up the capacity vacated by BA. Overall, the extent to which BA could exert buyer power by threatening to switch its capacity away from the airport appears very limited, and strongly suggests that the discipline that BA might exert on Heathrow is not sufficiently strong to be regarded as countervailing buyer power.
- 3.103 Further, while Virgin's and BMI's operations are concentrated at Heathrow (66 and 100 per cent respectively), they constitute only 5 per cent of

⁶⁷ CAA *Guidance on the Assessment of Airport Market Power* April 2011, see chapter 6 http://www.competition-commission.org.uk/assets/bispartners/competitioncommission/docs/pdf/inquiry/ref2007/airports/pdf/issu es_statement_response_ba.pdf

Heathrow's passengers. Therefore, while Heathrow is central to Virgin's and BMI's operations, the airlines' passengers constitute a relatively small proportion of the airport's operation, and would not confer any buyer power on Virgin or BMI.

3.104 Table 10 sets out the shares of the ten largest airline users of Heathrow, in terms of passengers carried.

Table 10 Passengers carried by airlines at Heathrow 2010

Rank	Airline	Pax	Share
1	BRITISH AIRWAYS PLC	25893315	39%
2	VIRGIN ATLANTIC AIRWAYS LTD	3553723	5%
3	BMI	3386736	5%
4	LUFTHANSA	2380366	4%
5	AMERICAN AIRLINES	2182617	3%
6	AER LINGUS	2095749	3%
7	AIR CANADA	1511603	2%
8	SAS	1477421	2%
9	EMIRATES	1285933	2%
10	UNITED AIRLINES	1260769	2%

Source: CAA airport statistics 2010

3.105 This table shows that, other than BA, other carriers have at most a 5 per cent share of Heathrow passengers. For many of these carriers, it is likely that Heathrow passengers would also constitute a relatively small percentage of their total passengers, particularly for the inbound carriers.

3.106 These inbound carriers are more likely to face lower switching costs when reducing their use of Heathrow. However, their size and the strong demand for capacity to use Heathrow, suggests that these airlines would not enjoy buyer power. These airlines are likely to be amongst the most marginal users of Heathrow, and are likely to exert a degree of competitive pressure on the airport. However, the strength of this pressure is not sufficiently large to be described as buyer power.

Examples of airline switching at Heathrow

3.107 The above discussion highlights that many of the carriers at Heathrow are likely to face particularly high switching costs, particularly those carriers that are based at the airport and those operating long-haul services, particularly where cargo is also carried. This section considers the recent evidence on actual airline switching to and from Heathrow, and whether this supports the analysis set out above.

3.108 In general terms, in recent years, examples of airline switching involving Heathrow have typically involved switching to Heathrow. This reflects what airlines have told the CAA about the particular attractiveness of Heathrow, and shows that airlines are willing to switch to Heathrow when the opportunity arises. A clear example of this is the reaction of the US long-haul carriers to the liberalisation of the UK-US market, following the implementation of the EU-US air services agreement ('Open Skies') in 2008. This change saw a number of US carriers moving routes to Heathrow,

together with expansion by the carriers already at Heathrow. Table 11 shows the switching activity.

Table 11 Increases in airline services at Heathrow following the implementation of the EU-US air services agreement⁶⁸

The table below summarises the changes in transatlantic services at Heathrow. Overall, there are an extra 18 daily services between Heathrow and the US (+22%) and about 10,000 seats per day additional capacity (+19%).

Airline	Route frequency	Terminal
Air France	1 x Los Angeles	2
American Airlines	2 x Dallas, 6 pw Raleigh-Durham; Reduced New York (JFK) by 1 daily service	3
British Airways	2 x Houston, 1 x Dallas; Frequency increases on New York (JFK), Seattle and Washington; Terminated a daily Detroit service	5
BMI	No transatlantic services	1
Continental	2 x Newark, 2 x Houston	4
Delta	2 x New York (JFK), 1 x Atlanta (joint operations with Air France)	4
Northwest	1 x Detroit, 1 x Minneapolis, 1 x Seattle (joint operations with KLM)	4
United Airlines	1 x Denver	3/1 (*)
US Airways	1 x Philadelphia	1
Virgin Atlantic	No change	3

(*) United move from T3 to T1 on 10 June 2007

3.109 The willingness to switch to, rather than from, Heathrow when this is permitted and/or possible shows the attractiveness of the airport. This is likely to be explained by the combined impact of the network effects, higher yields, and connecting passengers available at Heathrow, together with the higher yields available from bellyhold cargo.

3.110 In terms of airlines switching away from Heathrow, the examples are somewhat limited. Whilst the major carriers have closed individual services at Heathrow, these changes have not resulted in a corresponding increase in services at other airports. There are, however, a number of exceptions:

- Through the 1990s, British Airways adopted a dual-hub strategy at Heathrow and Gatwick. This included moving several sub-Saharan Africa services (excluding South Africa) from Heathrow to Gatwick⁶⁹, as well as destinations to Latin America. In 2002, this strategy was formally abandoned, perhaps highlighting the difficulties associated with switching significant hub services from Heathrow to Gatwick. The routes that remained at Gatwick included those to leisure destinations such as the Caribbean, as well as services to the US until the 'Open Skies' agreement in 2008 upon which they were moved to Heathrow.

⁶⁸ Extract from Airport Coordination Limited – *Heathrow Summer 2008 Initial Coordination Report* http://80.168.119.219/UserFiles/File/LHR%20S08%20Start%20of%20Season%20report_1.pdf

⁶⁹ <http://www.flightglobal.com/news/articles/ba-boosts-gatwick-hub-16275/> and http://www.britishairways.com/travel/history-1990-1999/public/en_us

Further, British Airways has recently switched routes to Algiers⁷⁰ and Mauritius⁷¹ from Heathrow to Gatwick.

- British Airways has also expanded its operations at London City airport, including business class-only flights to New York JFK since 2009⁷². Through its Open Skies subsidiary, the airline also operates business class-only services from Paris Orly to New York Newark, which it has expanded through the acquisition of the l'avion airline⁷³.

3.111 Instead, where services that were once operated at Heathrow have commenced at other airports they have typically been operated by carriers who are not present at Heathrow.

Heathrow's marginal airlines

3.112 The above discussion of airline switching at Heathrow has highlighted the importance of alliance-related network effects and of the connecting passenger and bellyhold cargo feed to the majority of the airlines' operations. However, a number of airlines at Heathrow do not rely on connecting passengers, with their services carrying less than 10 per cent, which would suggest that these carriers could have the greatest ability to switch away, and so constitute the airport's marginal airlines. To understand whether these airlines are likely to exert a significant discipline on the airport, it is useful to consider the overall size of these carriers. There are 18 airlines with less than 10 per cent of connecting passengers operating from Heathrow. These airlines account for approximately 3.9 million (6 per cent) of Heathrow's passengers, as shown in Table 12.

⁷⁰ http://www.britishairways.com/travel/new-routes/public/de_de

⁷¹ <http://www.travelweekly.co.uk/Articles/2011/02/08/36051/ba+moves+mauritius+flights+to+gatwick.html>

⁷² <http://press.ba.com/?p=764> and <http://press.ba.com/?p=1158>

⁷³ <http://press.ba.com/?p=522>

Table 12 carriers with less than 10% connecting pax 2010

Airline Name	Local	Connecting	Total	% Connect @ London
Alitalia	721,600	76,495	798,095	9.6%
Delta Airlines	699,316	73,333	772,649	9%
Swiss	802,459	71,424	873,883	8%
China Eastern Airlines	60,723	5,080	65,803	8%
Air Seychelles	18,966	1,533	20,499	7%
Oman Air	118,603	8,845	127,448	7%
PIA Pakistan International	271,242	19,332	290,574	7%
Turkish Airlines	448,739	29,219	477,958	6%
Swift Air	108,125	6,753	114,878	6%
CAAC (China)	137,582	7,991	145,573	5%
Air Algerie	44,446	2,411	46,857	5%
Syrianair-Syrian Arab Air	20,493	648	21,141	3%
Turkmenistan Air	28,310	248	28,558	1%
Uzbekistan Airways	24,416	-	24,416	0%
Air Astana	19,344	-	19,344	0%
Air Transat	16,757	-	16,757	0%
Libyan Arab Airlines	10,616	-	10,616	0%
Rossiya	1,961	-	1,961	0%

Source: CAA airport statistics 2010

Note: asterisk denotes small sample size

- 3.113 However, the three largest of these airlines (Alitalia, Delta Airlines and Swiss), accounting for approximately 2.2 million Heathrow passengers, are members of alliances based at hub airports across Europe. Indeed, Swiss and Alitalia operate “feeder” routes to European hub airports from Heathrow, while Delta serves routes to North America. The switching decisions of these airlines would still be affected by the alliance-based network effects at Heathrow, and the importance of connecting their hubs to London, and Heathrow in particular.
- 3.114 Further, Heathrow’s catchment area is both densely populated and has a high wealth per capita, which increases the yield per passenger available to airlines. This is likely to affect the switching costs faced by these more-marginal services. For example, Swiss would need to consider the impact of switching a route away from Heathrow on the remainder of its network, as the route is likely to feed other services from its hub in Zurich, and deploy the aircraft on the next-best service (which seems unlikely to generate the yields available at Heathrow). Similarly, Delta serves routes to North America, from which passengers typically connect to domestic U.S. routes, and so would face similar switching costs.
- 3.115 The remainder of the airlines listed in Table 12, carrying a total of approximately 1.6 million passengers, are not members of an airline alliance, though some have code-share agreements with alliance member airlines, and serve principally long-haul routes. It seems unlikely that these airlines would face particularly low switching costs, in light of the attractiveness of the catchment area and the associated yields on Heathrow routes, and the potential importance to these carriers of connecting their bases to London.

- 3.116 However, even if these airlines faced particularly low switching costs, and were very responsive to the airport's pricing, their combined size (less than 2.5 per cent of Heathrow's passengers) suggests that they are unlikely to constitute an effective competitive constraint on the airport.

Summary: airline switching costs by business model

- 3.117 The analysis of passenger airline switching costs suggests that, although the willingness and ability to switch away from Heathrow varies according to the nature of an airline's operations, carriers reliant on connecting passengers and the network effects at the airport would be likely to face very significant switching costs.
- 3.118 Based network carriers at Heathrow need to operate both short-haul "feeder" routes and long-haul routes from the airport, and so would have a very limited scope to switch any of their services to another airport due to the loss in revenue not only from the route itself but from the impact on overall network profitability. Other based and inbound carriers at Heathrow, such as Virgin, also rely on connecting passenger traffic to increase their load factors, and on the network effects in part created by the strong presence of airline alliances. Additionally, routes operated from Heathrow benefit both from additional passenger yield from premium (non-economy) tickets and from bellyhold cargo.
- 3.119 These route-related switching costs combine with the significant infrastructure investments made by the based carriers at the airport to suggest that these airlines are unlikely to be operating many of the 'marginal' services at the airport.
- 3.120 Further, it is unlikely that these based carriers – or any other airlines at Heathrow – enjoy countervailing buyer power, in part due to the excess demand for slots at the airport, which means that any significant reduction in an airline's use of the airport will prompt others to expand to use the available capacity.
- 3.121 Whilst the majority of airlines operating from Heathrow depend on a significant proportion of connecting passengers, some inbound carriers do not rely on connecting passengers. These airlines, such as those with less than 10 per cent of their passengers connecting at Heathrow, would appear to be the carriers facing the lowest switching costs. Consequently, these carriers may constitute the marginal airlines at Heathrow⁷⁴, but do not appear to be sufficiently large to represent an effective discipline on the airport.

Passenger responsiveness and switching

- 3.122 Switching costs affect a passenger's willingness and ability to switch away from Heathrow in response to a price rise. The market share analysis has shown that Heathrow has a significant share of both surface and, to a lesser degree, connecting passengers. As the preferences and switching costs of

⁷⁴ Airlines with a high individual share of connecting passengers equating to relatively small numbers of passengers would still rely on connecting feed for their services, though they may be marginal from the airport's business point-of-view.

these two groups can differ significantly, this section considers the willingness and ability of each group to switch away from Heathrow.

Surface (O&D) passengers

3.123 To assess the responsiveness of surface passengers, we consider the impact of:

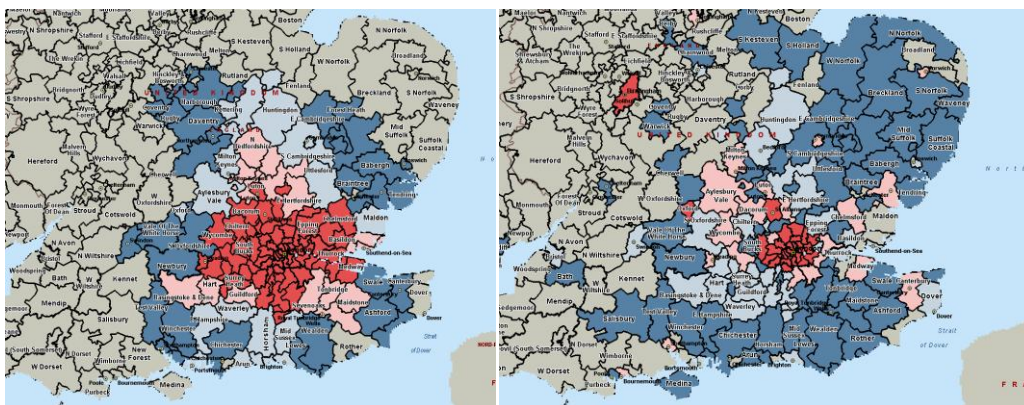
- Passenger location (i.e. catchment areas);
- Journey purpose;
- Destination choice; and
- Route overlaps.

Catchment area analysis

3.124 Airport catchment areas describe the area over which the majority of passengers travel to the airport or from the airport to their final surface destination. The overlap of airports' catchment areas is one indicator of the potential for competition for passengers, as passengers in these overlapping areas are more likely to view the two airports as reasonable substitutes (to the extent that suitable services are available at each airport).

3.125 Figure 15 shows the catchment area overlaps calculated on the basis of travel time (left) and historical usage patterns (right), for Heathrow, Gatwick, Stansted and Luton. The travel time catchment area is calculated by identifying the area within which passengers can reach an airport within 90 minutes. The historical usage catchments are calculated by taking the districts, ranked by the number of passengers originating from them, that contain the first 80% of each airport's passengers. In each case, these catchment areas are overlapped to produce the maps in Figure 15. The CAA's working paper on catchment area analysis provides detailed analysis of the catchment areas of the four largest London airports⁷⁵.

Figure 15 Heathrow catchment areas based on travel time (left) and historical usage (right)



Source: CAA analysis of the CAA Passenger Survey 2010 and DfT surface access data
Overlaps: Blue: 1 airport; Light blue: 2 airports; Light red: 3 airports; Red: 4 airports

3.126 The catchment area overlaps on the left-hand map show that the population in the inner and outer London districts are particularly likely to be able to

⁷⁵ These are Heathrow, Gatwick, Stansted and Luton. CAA *Catchment area analysis* October 2011
<http://www.caa.co.uk/docs/5/Catchment%20area%20analysis%20working%20paper%20-%20FINAL.pdf>

substitute between Heathrow, Gatwick, Luton and Stansted, if suitable services were available at each airport.

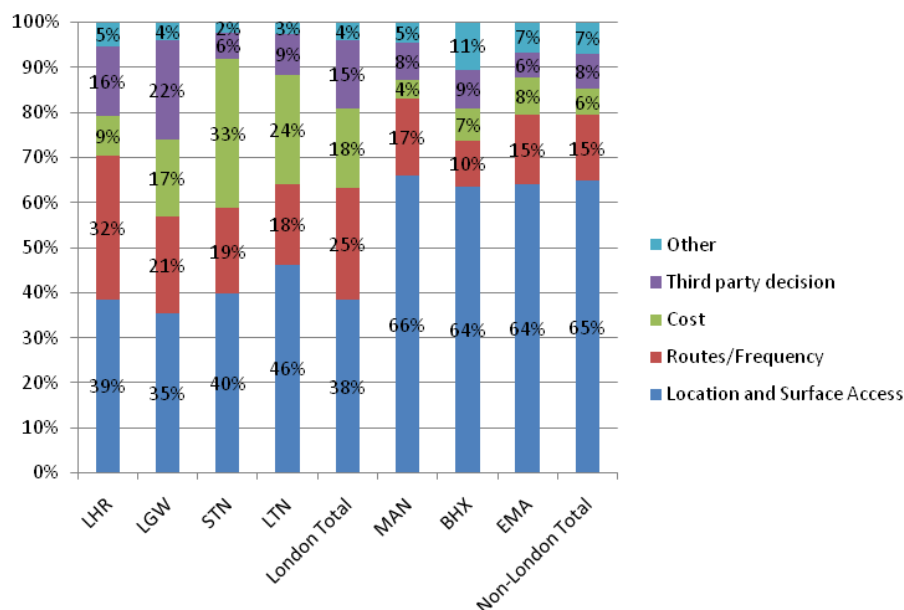
- 3.127 However, when considering the passengers' historical airport usage (the right-hand map), the area over which all the catchment areas overlap is much smaller. Nevertheless, the four-way overlap area (shown in dark red) based on historical usage still includes 48 per cent of Heathrow's surface passengers⁷⁶. In addition, a significant proportion of Heathrow's passengers originate from areas where the airport's catchment area overlaps with at least one other major London airport. Indeed, only 4 per cent of Heathrow's passengers originate from districts that are not also within the catchment areas of at least one of these airports.
- 3.128 The catchment area analysis would then suggest that there is considerable overlap between the catchment areas of the four London airports, providing strong evidence that there is scope for competition between the four major London airports to attract passengers. We consider below the impact that route choice might have on the strength of this competition for passengers.

Journey purpose

- 3.129 Journey purpose is one factor that can affect the willingness of passengers to switch to use an alternative airport, including through the impact that journey purpose has on the price sensitivity of passengers, and on the extent to which passengers might be willing to travel to an alternative destination.
- 3.130 There is considerable variation in the journey purpose of passengers using different airports. As discussed in paragraph 3.17 and 3.31, Heathrow has a particularly strong position in inbound and outbound long-haul business and VFR passengers, and in outbound short-haul business passengers. In general terms, business passengers and those travelling long-haul are likely to be less sensitive to price changes than those travelling for leisure or to short-haul destinations.
- 3.131 Reflecting this, the mix of passengers at Heathrow will tend to affect the reasons why passengers are choosing to use the airport. The CAA's working paper on passengers' airport preferences considers this issue, setting out evidence on the reasons why passengers choose particular airports. Figure 16 sets out the results of this analysis. It shows that while surface access reasons (proximity and ease of access) are the most often cited reason for airport choice, route frequency is the second most important reason why passengers choose to fly from Heathrow. It is also noticeable that the importance of cost at Heathrow is significantly lower than at the other major London airports.

⁷⁶ See table 5 in CAA *Catchment area analysis* October 2011
<http://www.caa.co.uk/docs/5/Catchment%20area%20analysis%20working%20paper%20-%20FINAL.pdf>

Figure 16 Reasons for airport choice



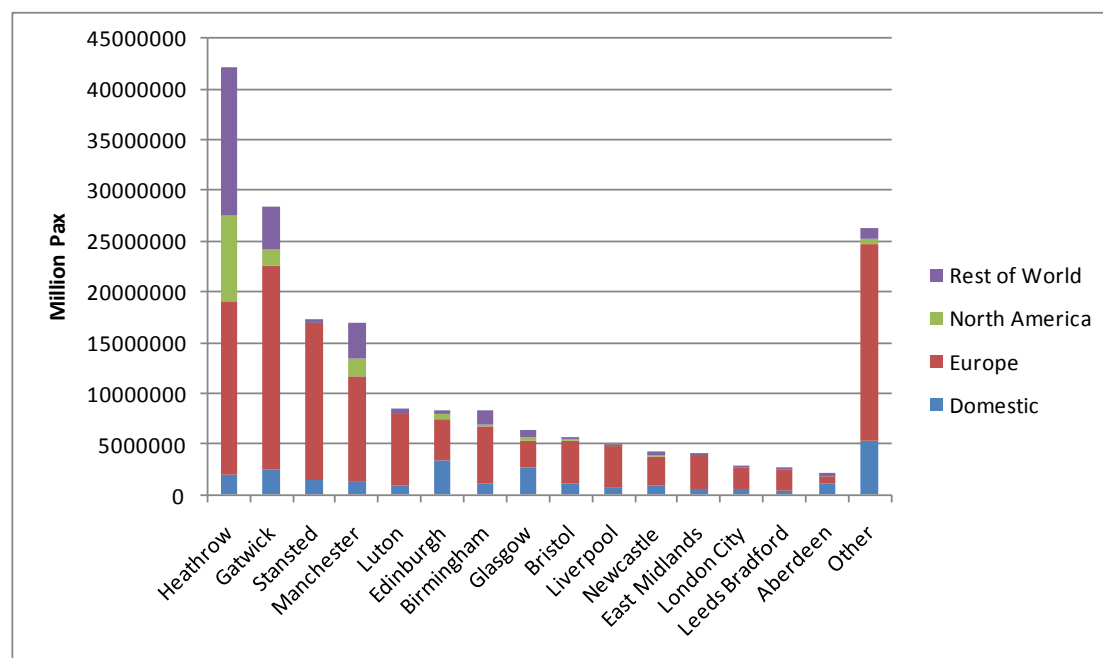
Source: CAA analysis of CAA Passenger Survey data (January to July 2011 provisional)

- 3.132 A further factor affecting passenger switching costs is the impact that corporate deals might have on the responsiveness of business passengers to price changes. Companies whose employees undertake large volumes of travel may sign corporate contracts with an airline. These contracts can typically offer fare reductions in exchange for a degree of exclusivity and/or minimum booking volumes. These agreements can significantly reduce the choices available to individual business passengers and can mean that a group of business passengers will virtually always fly through Heathrow. The role of corporate contracts and travel offices could well be reflected by the 16 per cent of passengers travelling through the airport due to third party decision.
- 3.133 In addition to the survey responses in Figure 16 above, it is possible that loyalty schemes, such as frequent flier miles, may also play a role in limiting the choice set of certain types of passengers. For example, a business passenger (whether or not part covered by a corporate contract) may fly with a particular airline at Heathrow to collect loyalty points, while a leisure passenger may be tied to a particular airline when seeking to 'spend' any accumulated loyalty points. Such loyalty programs could act to limit certain passengers' choice sets and reduce the potential for passengers to switch away from Heathrow.
- 3.134 Heathrow is also differentiated from the other London airports by there being a larger number of premium (higher yield) tickets, as discussed in the context of passenger airline switching costs in paragraph 3.79. For passengers with a preference for premium (non-Economy) services from their airline, there appears to be significantly less choice of airport, albeit that some services at Gatwick offer premium cabins, as do airlines operating out of London City.

Destination choice

- 3.135 Market share analysis in paragraph 3.14 shows that Heathrow has by far the largest share of surface long-haul passengers, both across the London airports and the UK airports as a whole. Though this is likely to be partly a result of the historical presence of long-haul routes at Heathrow, it could also be due to the airport's rich catchment area, in terms of wealth per capita⁷⁷, and good transport links with a number of areas where economic activity involves significant air travel, notably with Greater London.
- 3.136 Figure 17 shows that Heathrow has by far the greatest number of surface passengers travelling on long haul flights (to North America and to the Rest of the World), with over 23 million doing so. Only Gatwick and Manchester also have a significant, albeit much smaller, number of surface long-haul passengers. In contrast, short haul passengers are more widely distributed across airports in the London area and in the UK as a whole.

Figure 17 Surface airport passengers by world region of immediate destination 2010



Source: CAA Airport Statistics

- 3.137 The concentration of surface long-haul passengers at Heathrow would suggest that, in many cases, they may not have any viable substitute services to those at Heathrow. Their principal alternative could possibly be to travel to another destination by another mode of transport, or not to travel. Unlike their surface short-haul counterparts, surface long-haul passengers at Heathrow therefore appear to face a very limited choice set and, as a result, larger switching costs.

Airline route overlaps

- 3.138 The catchment area overlaps analysed in paragraph 3.124 showed the significant overlaps between the catchment areas of Heathrow and the other

⁷⁷ Slide 31 in Presentation slides for stakeholder seminar held on 15 November 2011
<http://www.caa.co.uk/docs/5/StakeholderEvent15Nov-data-FINAL-AMENDED28112011.pdf>

London airports. However, those passengers with a strong route preference (notably business and VFR passengers) may only view an airport as a reasonable alternative if there is a service to the same airport, or to the same city. Some holiday passengers might have similarly strong destination preferences, albeit that a proportion may be willing to switch to other services to similar types of destination ('city breaks', 'beach holidays', etc).

3.139 It is useful, therefore, to consider the extent of route overlaps. The remainder of this section considers the route overlaps in (a) short-haul and (b) long-haul services.

a) Short-haul route overlaps

3.140 Table 13 shows that there is very high degree of route overlap between short-haul city-pairs served from the London airports.

Table 13 Number of short-haul route overlaps between London airports 2010

	Cities Served	Overlaps	% overlap	LHR	LGW	STN	LTN	LCY
LHR	64	55	86%		47	33	28	16
LGW	121	92	76%			65	48	21
STN	131	79	60%				42	16
LTN	69	59	86%					13
LCY	26	24	92%					

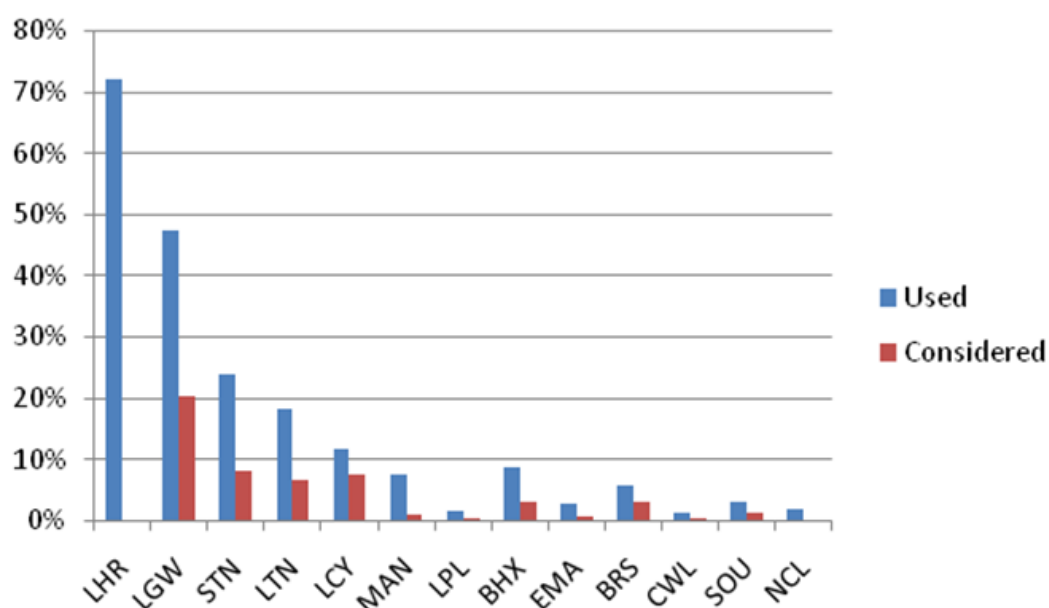
Source: CAA airport statistics

3.141 Of Heathrow's short-haul city pairs, 86 per cent are also served at least one other London airport, with the most routes overlapping with Gatwick, followed by Stansted and Luton.

3.142 However, although this would suggest that passengers travelling point-to-point on short-haul routes could have significant scope to switch away from Heathrow, this would not necessarily be the case for connecting passengers, as they would typically require an overlap of both the short-haul service and the connecting long-haul service. Nevertheless, surface short-haul passengers at Heathrow appear to have a significant degree of choice as to which airport to use – even without considering the extent of overlaps between Heathrow and other non-London neighbouring airports.

3.143 However, evidence from the CAA Passenger Survey shows that few passengers at Heathrow in reality view the other London airports as reasonable alternatives, with the possible exception of Gatwick. Figure 18 shows the results of a survey question which asked passengers at Heathrow to list the airports they have used in the previous two years (shown in blue) and those airports they had considered as alternatives to Heathrow for the short-haul flight they were about to take.

Figure 18 Airports previously used in the past two years and airports considered as alternatives for current flight by short haul passengers at Heathrow



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

3.144 The results show that, although the five major London airports had been previously used by at least 10 per cent of passengers in the preceding two years, Gatwick is the only airport to have been considered as an alternative by more than 10 per cent of Heathrow passengers. Stansted, Luton and London City were also cited, though only by between 5 per cent and 10 per cent of passengers.

3.145 It seems that, in many cases, although passengers may be able to switch away from Heathrow, they may not necessarily be willing to do so.

b) Long-haul route overlaps

3.146 Table 14 shows that the degree of overlap for long-haul routes between London airports is considerably less than for short-haul routes. The most significant city-pair overlap is between Heathrow and Gatwick, where 12 routes overlap. However, city-pair overlaps with other London airports amount to only 17 per cent of the 86 long-haul routes at Heathrow.

Table 14 Number of long-haul route overlaps between London airports 2010

	Cities Served	Overlaps	% overlap	LHR	LGW	STN	LTN	LCY
LHR	86	15	17%		12	1	1	1
LGW	36	14	39%			0	2	0
STN	1	1	100%				0	0
LTN	3	3	100%					0
LCY	1	1	100%					

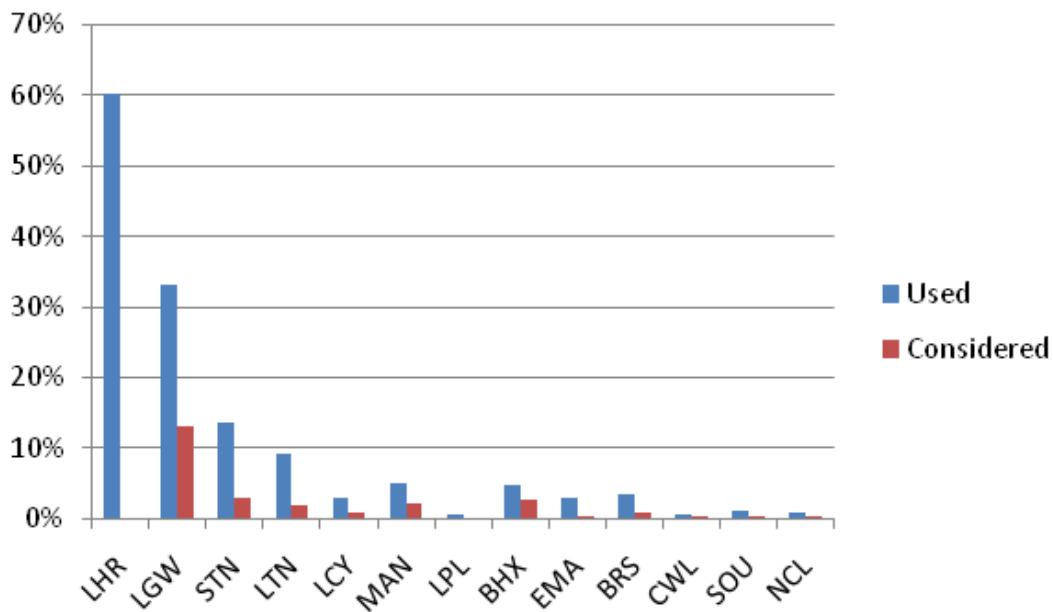
Source: CAA airport statistics

3.147 This suggests that the majority of passengers flying long-haul at Heathrow will have relatively few alternative airports to choose from, unless they are

willing to fly to one of a relatively small number of different long-haul destinations.

3.148 This evidence is supported by the results of the CAA’s Passenger Survey, shown in Figure 19. These results show that a third of long-haul surface passengers at Heathrow have previously used Gatwick for a flight (either short- or long-haul) in the previous two years. A much smaller proportion of Heathrow passengers considered Gatwick as a viable alternative to travelling from Heathrow, for the long-haul flight they were about to take.

Figure 19 Airports previously used in the past two years and airports considered as alternatives for current flight by long haul passengers at Heathrow



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

3.149 Taken together, this evidence shows that surface passengers have limited ability (due to the limited long-haul route overlaps) and a relative lack of willingness to switch to away from Heathrow for long-haul flights.

Connecting passengers

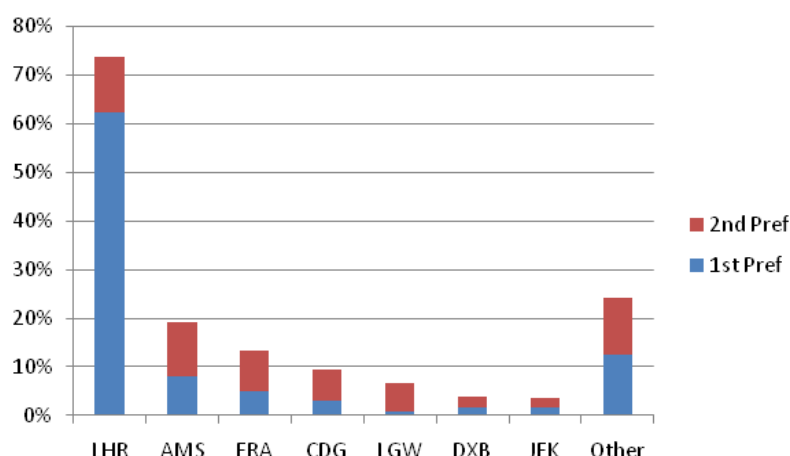
3.150 In contrast to surface passengers, Heathrow’s connecting passengers face a different choice set than their surface counterparts, as they require the ability to connect to their final destination. Evidence in the CAA’s working paper on *Passengers’ airport preferences*⁷⁸ shows that 35 per cent of connecting passengers at Heathrow had considered connecting through another European hub airport⁷⁹. However, it also appears that the majority of these passengers also prefer to use Heathrow.

3.151 Figure 20 sets out the results of connecting passengers being asked to state their first and second choice airport through which to connect if the price were the same at each airport.

⁷⁸ CAA *Passengers’ airport preferences – Results from the CAA Passenger Survey* November 2011 <http://www.caa.co.uk/docs/5/Passenger%20survey%20results%20-%20FINAL.pdf>

⁷⁹ Ibid paragraph 2.20

Figure 20 First and second preference airports for Heathrow connecting passengers



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

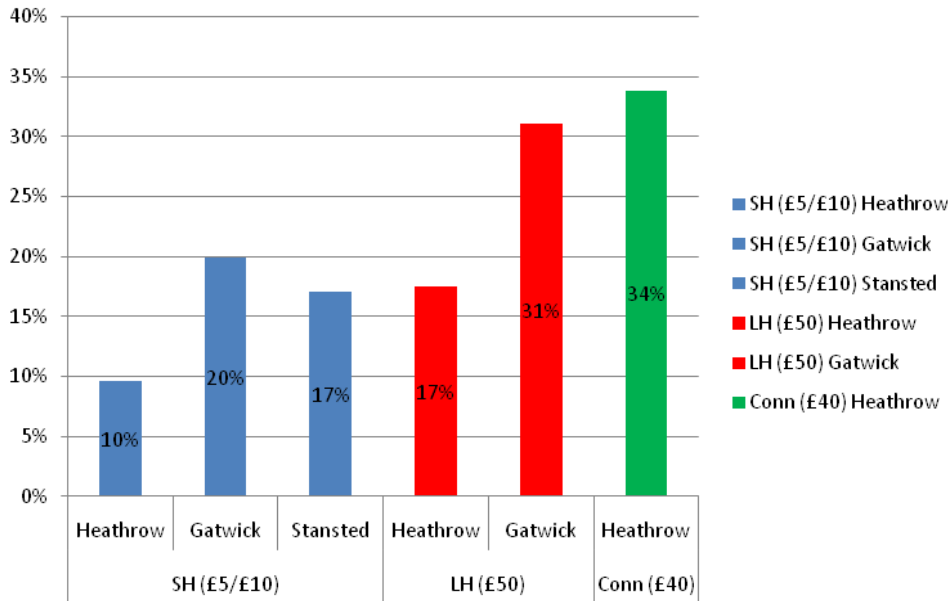
- 3.152 Over 60 per cent of passengers connecting at Heathrow appear to have a clear preference for doing so, though a small proportion of passenger would prefer to connect at one of the three other major European hubs (Amsterdam Schiphol, Frankfurt am Main, and Paris Charles de Gaulle). Each of these four hubs is also the second preference for approximately 10 per cent of respondents.
- 3.153 This evidence would tend to indicate that whilst many connecting passengers at Heathrow are likely to be able to switch to another European hub airport, they may not necessarily be willing to do so.
- 3.154 In addition, as discussed with regard to surface passengers in paragraph 3.133, airline loyalty schemes may tie a number of passengers to connecting through Heathrow, as their airline (or alliance) may not operate their preferred route via another European hub. However, the evidence on the whole would suggest that connecting passengers tend to have a wider scope for switching away from Heathrow than surface long-haul passengers.

Passenger price responsiveness

- 3.155 The above analysis has shown that surface and connecting passengers at Heathrow would be, to varying degrees, able to switch away as they consider other airports as substitutes. In order to test the willingness to switch, stated preference data were obtained from the CAA's on Passenger Survey.
- 3.156 Figure 21 sets out the results. Passengers were asked their response if the cost of their flight and every other flight at Heathrow increased by a fee approximating a 10 per cent increase per person, given the passengers' knowledge of the alternatives available from other airports. The figure below reports the proportions of respondents at Heathrow, Gatwick and Stansted

who stated that they would switch away from their respective airport or not travel⁸⁰.

Figure 21 Passenger price responsiveness to an increase in the cost of using their current airport



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question
 Note: The price increase for each type of passenger is given in brackets.

3.157 Surface short-haul passengers at Heathrow are the least likely to switch away in light of an increase in their cost of using the airport. This would suggest that, despite the strong degree of short-haul city-pair overlap between the London airports and an awareness of alternatives, surface short-haul passengers at Heathrow tend to have a low propensity to actually switch away. This is consistent with the evidence on whether these passengers actually considered using an alternative airport to Heathrow.

3.158 The group of surface short-haul passengers includes both point-to-point passengers and those flying short-haul to connect to a flight at another airport⁸¹, the latter group constituting approximately 7 per cent of surface short-haul passengers at Heathrow. These passengers would be more restricted in their choice of substitute airport than those flying point-to-point, since they would need to be able make the same connecting journey as from Heathrow⁸². Similarly, surface long-haul passengers at Heathrow (17 per cent) are less likely to switch away compared to those at Gatwick (31 per cent). Additionally, 36 per cent of surface long-haul passengers' choice sets will be probably restricted as they fly from Heathrow to connect via another airport.

⁸⁰ For full details, see the CAA's working paper on passengers' airport preferences. *CAA Passengers' airport preferences – Results from the CAA Passenger Survey November 2011*
<http://www.caa.co.uk/docs/5/Passenger%20survey%20results%20-%20FINAL.pdf>

⁸¹ These passengers are surface passengers from the point of view of Heathrow because they travel to the airport by surface transport.

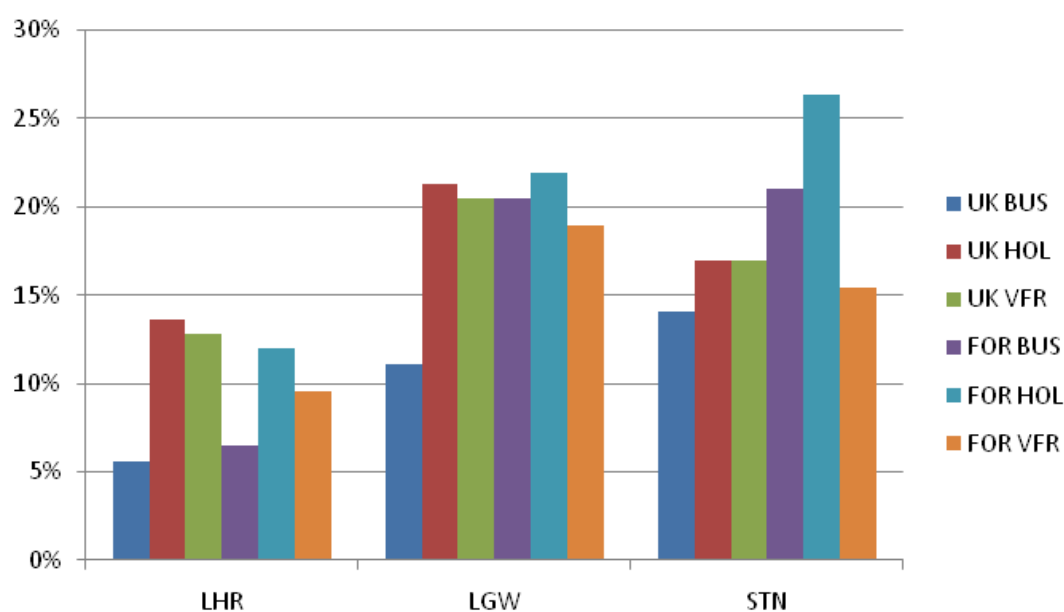
⁸² These passengers could also of course change their destination, or travel by self-connecting rather than on a connecting ticket (a ticket on which all sectors of their journey are included).

3.159 In contrast to surface passengers, approximately 34 per cent of connecting passengers, representing approximately 8 million passengers, responded that they would be willing to switch away from Heathrow in light of a price rise.

Surface passengers by journey purpose and residence

3.160 It is useful to consider the price responsiveness of different types of passengers, in order to identify the groups most likely to switch away in light an increase in prices at Heathrow (this can inform an understanding of which groups are likely to be the most ‘marginal’ passengers). Figure 22 shows price responsiveness of the surface short-haul passengers, according to residence and journey purpose, based on the CAA’s survey results.

Figure 22 – Short-haul surface passenger price responsiveness by journey purpose and residence



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

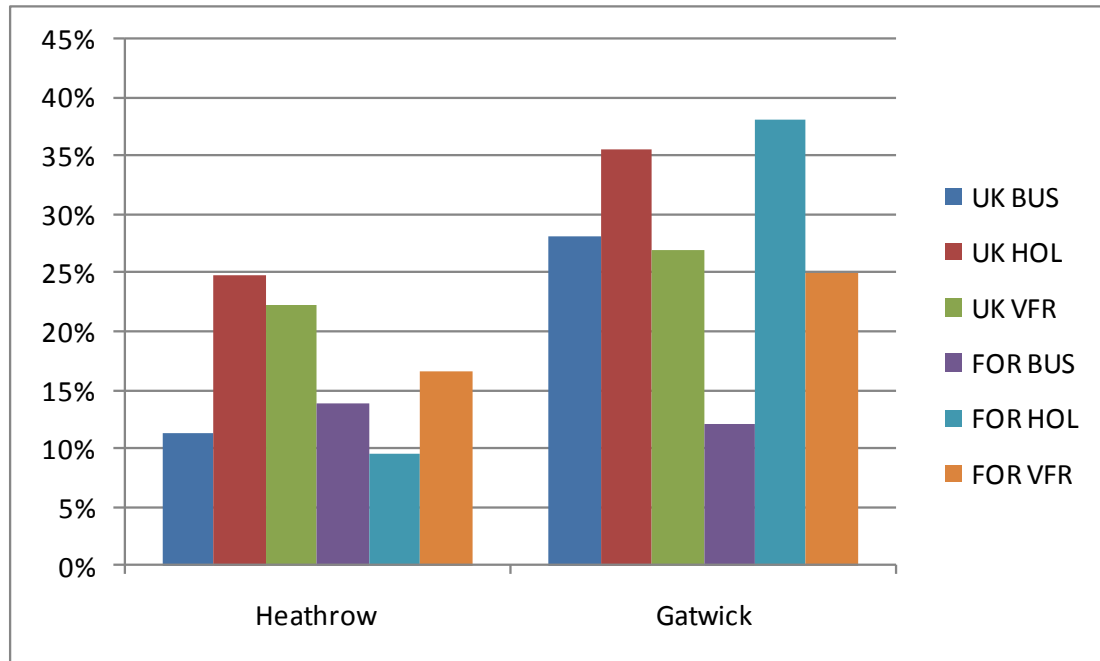
3.161 Short-haul business passengers, both UK and foreign residents, are the least price responsive – a passenger segment which Heathrow has the largest share of across the London airports. By contrast, the most price responsive passengers appear to be UK and foreign resident holiday and VFR passengers, with between 10 per cent and 14 per cent stating they would switch away, which represents approximately 1.3 million passengers. The market share analysis in paragraph 3.33 shows that Heathrow has only the third largest share for both UK holiday and VFR passengers across the London airports, and in both cases the share is considerably smaller than the two largest.

3.162 For their foreign counterparts, Heathrow has the largest share of short-haul holiday passengers (35 compared to 25 per cent at Gatwick) and the joint largest share of short-haul VFR (25 per cent, with Gatwick). The combined evidence of price sensitivity and Heathrow’s market shares would suggest that these passengers would be most likely to switch away from Heathrow in

response to a price rise, and that the airport does not have a particularly strong position in respect of these passenger segments.

3.163 For surface long-haul passengers, the results in Figure 23 suggest that UK (outbound) holiday and VFR passengers are the most likely to be responsive, followed by foreign VFR passengers. Together, this would represent approximately 3.3 million passengers, and 3.6 million when including foreign business passengers, switching away from Heathrow in light of a cost increase in using the airport.

Figure 23 Long-haul surface passenger price responsiveness by journey purpose and residence



Source: CAA analysis of CAA Passenger Survey data – supplementary stated preference question

3.164 However, market share analysis suggests that Heathrow has the largest share (56 compared to 41 per cent at Gatwick) of UK long-haul holiday passengers, and 91 per cent of UK long-haul VFR passengers across the London airports. Heathrow also has a share of 88 per cent of foreign VFR passengers. It would then appear that, although these passengers would be willing to switch away from Heathrow, their ability to do so is limited by the limited availability of long-haul services at other UK airports that are focused on passengers with strong destination preferences. As a result, surface long-haul UK holiday passengers may be the most likely of these three groups to switch in significant numbers from Heathrow, as they would be more inclined to consider alternative long-haul destinations available at other UK airports.

Summary: responsiveness of surface and connecting passengers

3.165 Overall, while catchment area and city-pair suggest a strong potential for competition between the London airports, surface passengers at Heathrow are much less likely to switch away from the airport than passengers at either Gatwick or Stansted.

- 3.166 For surface passengers at Heathrow, the evidence suggests that short-haul UK and foreign resident holiday and VFR, and long-haul UK holiday passengers would be the marginal passengers most likely to be able and willing to switch away from Heathrow. However, this must be placed in the context that nearly 70% of passengers using Heathrow have a first preference for using the airport, with only 20% of passengers considering Gatwick as an alternative for their current flight and less than 10% having considered any one other airport.
- 3.167 While some surface passengers may be likely to switch away from Heathrow in light of an increase in the cost of using the airport, evidence suggests that connecting passengers are far more likely to be price responsive and possibly switch to another European hub airport, as 35% of connecting passenger respondents had indicated. Further, Heathrow has approximately a 25% share of connecting passengers across the four major European hub airports, which would suggest more competitive constraints for these passengers. However, for the majority of Heathrow's connecting passengers (62%) would prefer to connect through Heathrow than another hub airport.

Airport sensitivity to passenger and airline switching

- 3.168 This chapter has so far considered the switching costs of passenger airlines and passengers in switching away from Heathrow in light of an increase in the cost of using the airport. When assessing Heathrow's market power, it can be informative to consider the magnitude of the passenger loss the airport could sustain and how many passengers would be likely to switch away. Critical loss analysis⁸³ provides an indication of this by asking for what volume (passenger) loss would a price increase of 5 or 10 per cent become unprofitable⁸⁴, under a set of assumptions⁸⁵.
- 3.169 This price rise can be applied by the airport in different ways, for example across aeronautical charges or across a combination of both aeronautical and non-aeronautical charges. Reflecting this, the critical loss figures in Table 15 are presented for 5 and 10 per cent increase in these two different ways. Additionally, an airport's operating costs may be linked to some degree to changes in its passenger numbers. As a result, critical losses are calculated assuming fixed operating costs, and assuming a passenger elasticity of 0.3 between operating costs and passengers⁸⁶. That is, operating costs per passenger fall 30% for each passenger switching away⁸⁷.

⁸³ Critical loss analysis is also relevant to understanding the relevant market within which an airport operates. We have chosen to present the information within the assessment of the market power for ease of exposition. The conclusions are, of course, also relevant to the analysis of market definition.

⁸⁴ The critical loss is therefore the volume loss that would make the airport indifferent between raising prices and keeping them at their existing levels.

⁸⁵ See the CAA's working paper on *Empirical methods for assessing geographic markets, in particular competitive constraints between neighbouring airports*

<http://www.caa.co.uk/docs/5/geogmarketworkingpaper.pdf>

⁸⁶ This staff-passenger elasticity was calculated by the Competition Commission in its Q5 price control review. http://www.competition-commission.org.uk/rep_pub/reports/2008/fulltext/539ah.pdf

⁸⁷ Another way of describing a 0.3 staff to passenger elasticity is that, for a 10% fall in passengers, the number of staff would be expected to fall by 3% percent.

Table 15 Critical loss calculations for Heathrow

SSNIP increment	Increasing aeronautical revenue		Increasing total revenue	
	5%	10%	5%	10%
Passengers	66,111,000	66,111,000	66,111,000	66,111,000
Aeronautical Revenue	997,500,000	997,500,000	997,500,000	997,500,000
Non-Aeronautical Revenue	856,100,000	856,100,000	856,100,000	856,100,000
Total Revenue	1,853,600,000	1,853,600,000	1,853,600,000	1,853,600,000
Operating Costs	950,500,000	950,500,000	950,500,000	950,500,000
Current				
Aeronautical Revenue per Passenger	15.08826065	15.08826065	15.08826065	15.08826065
Non-Aeronautical Revenue per Passenger	12.94943353	12.94943353	12.94943353	12.94943353
Total Revenue per Passenger	28.03769418	28.03769418	28.03769418	28.03769418
Operating Costs per Passenger	14.37733509	14.37733509	14.37733509	14.37733509
After price increase				
Aeronautical Revenue per Passenger	15.84267369	16.59708672		
Non-Aeronautical Revenue per Passenger	12.94943353	12.94943353		
Total Revenue per Passenger	28.79210721	29.54652025	29.43957889	30.8414636
Increase in Revenue	49,875,000	99,750,000	92,680,000	185,360,000
Critical loss with fixed costs	1,732,246	3,376,032	3,148,143	6,010,091
Critical loss with cost savings	2,037,468	3,953,106	3,688,554	6,987,265

Source: Heathrow 2010 Regulatory Accounts

- 3.170 The second and third columns of Table 15 show the critical loss calculations for cases where the airport would increase only its aeronautical charges to yield a 5 or 10 per cent increase in its aeronautical revenue, and keeping non-aeronautical revenue unchanged⁸⁸. The required loss of passenger volume for a price increase to be unprofitable is 1.7 million for a 5 per cent increase and 3.4 million for a 10 per cent increase of aeronautical charges when assuming operating costs per passenger to be fixed. These required volumes increase when there is a cost saving for each lost passenger, since the marginal loss of revenue from each passenger switching away is partly compensated by the associated cost saving.
- 3.171 However, Heathrow could in principle increase a combination of its aeronautical and non-aeronautical charges to increase its total revenue per passengers by 5 or 10 per cent overall⁸⁹. For example, as well as modifying airport charges to airlines, it could also increase car parking charges or levy passenger access fees such as “kiss and fly” charges⁹⁰. The fourth and fifth columns in the above table set out the critical losses required when the airport increases its total revenue per passenger overall, meaning that the airport can increase its aeronautical and/or non-aeronautical revenue. The required losses in passenger volumes to make an increase unprofitable are 3.1 million and 6 million for a 5 and 10 per cent increase in total revenue per

⁸⁸ This methodology was employed in the Frontier Economics report for Easyjet, available on the CAA website: http://www.caa.co.uk/docs/5/rpt-easyJet%20Competition%20Assessment%20Final%20Report_Abridged.pdf

⁸⁹ Of course, Heathrow could also increase only its non-aeronautical revenue.

⁹⁰ Such charges are already in place in Edinburgh and Leeds Bradford airports, among others.

passenger respectively. These rise to 3.7 million and 7 million if the airport experiences a cost saving for each lost passenger⁹¹.

- 3.172 On the basis of Table 15, it would appear that Heathrow would need to lose a significant proportion of its passengers to make a 10 per cent increase in its total revenue per passenger unprofitable. For example, the critical loss of 6 million passengers would represent approximately 10 per cent of the airport's passengers. However, this analysis can only provide a qualified estimate of the required drop in passengers, as the calculations reflect certain underlying assumptions. A particularly relevant limitation is that critical loss analysis only considers the change in passenger numbers, whilst the interdependence of demand between passenger airlines and passengers cannot be captured. As a result, the critical losses calculated do not include any potential airline response to the drop in passengers caused by price rises that may lead to a greater overall loss of passengers at Heathrow.
- 3.173 The evidence of passenger price responsiveness discussed in 3.155 provides an indication of different passengers' sensitivity to a 10 per cent increase in their cost of using Heathrow. In a scenario where all passengers who stated that they would switch away from Heathrow would actually do so, this would amount to a 13.8 million drop in passengers at the airport, with 5.8 million surface and 8 million connecting passengers switching away from the airport. However, this estimate cannot be directly compared to the critical loss calculations as it is the result of asking a different question. Indeed, while the survey question asked passengers to respond to a 10 per cent increase in the cost of using the airport, the critical loss calculation assessed the required volume loss of passengers when revenue from charges, which could be levied to either airlines or passengers, increased by 10 per cent overall.
- 3.174 Additionally, airlines may not necessarily pass through a price increase to their passengers. Further, while passengers, in a response to a hypothetical question, may state that they would switch away from Heathrow, the suggested extent of hypothetical switching may not necessarily materialise. In particular, the results in Figure 21 need to be considered alongside other survey evidence (from the same respondents) suggesting a strong preference for Heathrow and further evidence suggesting an inability and at times an unwillingness to switch away from Heathrow, as discussed above in paragraph. Overall, it would seem unlikely that the actual loss of passengers would be sufficient as to make a 5 or 10 per cent price rise unprofitable for the airport.

Summary: Impact of passenger and airline switching on airport incentives

- 3.175 Due to the multi-sided nature of the airports market, where the airport is a platform upon which airlines and passengers interact, the combined results of

⁹¹ These figures are approximately double those of an increase in aeronautical revenue only. The explanation lies in the fact that, due to the approximately 55%-45% distribution of total revenue across aeronautical and non-aeronautical revenue, a 10% (5%) increase in aeronautical revenue per passenger results in an overall increase of 5.4% (2.6%) approximately in total revenue per passenger. As a result, increasing total revenue per passenger by the same increment would have a more considerable impact.

the reactions by both user groups should be considered in assessing the competitive constraints facing Heathrow.

Based carriers serving surface and connecting passengers

- 3.176 Based carriers at Heathrow face very high switching costs due to the nature of their operations. They are, therefore, very unlikely to be able to respond effectively to an increase in airport charges by switching away from Heathrow, and so would not constitute marginal consumers for the airport. Due to the captivity of these carriers, any constraints on Heathrow's pricing to these airlines would have to come from the responses of the airlines' surface and/or connecting passengers – and for the responsiveness of passengers to overcome the switching costs faced by the based airlines.
- 3.177 Surface short-haul passengers should in principle face a wide choice set of alternative airports, whilst surface long-haul passengers at Heathrow face a more limited choice set in the south east of England, limiting their ability to switch between different airports. However, the survey evidence shows that only Gatwick is frequently stated as an alternative airport by both short- and long-haul surface passenger and, further, that surface passengers at Heathrow are overall the least price responsive.
- 3.178 Whilst certain types of surface holiday and VFR passengers might represent the marginal passengers for Heathrow, it is not certain that a significant number of the 5.8 million price responsive surface passengers would actually switch away (although it should also be noted that this figure is not directly comparable to the critical loss calculation in Table 15⁹²). The need to fly on a connecting route and airline loyalty schemes appear to constitute additional barriers to switching. Overall, it appears rather unlikely that switching from surface passengers at Heathrow would discipline the airport in increasing its prices to captive based airlines.
- 3.179 The evidence also suggests that connecting passengers would be both willing and able, to an extent, to switch to connect through another European hub in light of an increase in the cost of using Heathrow, which might indicate that these passengers are likely to be more marginal than surface passengers. However, the majority of Heathrow connecting passengers would still prefer to connect through the airport. Although Heathrow faces competition from other European hub airports for connecting passengers, it is unlikely that the level of switching would be sufficient, in combination with surface passenger switching, to exceed the critical loss required to make the airport's price increases to based airlines unprofitable⁹³. Indeed, since connecting passengers and surface passengers are carried on the same services, the strength of demand from the latter may well insulate the former from the prospect that the based airlines would switch away from Heathrow.

⁹² It should also be noted that these passengers would stated they would switch in response to a 10 per cent increase in their cost of using Heathrow, not because of an increase in airport charges, which makes this number and the critical loss not directly comparable. Further, the former would be a substantial over-estimate of the actual loss of passengers.

⁹³ As with the figures of price responsiveness for surface passengers, the number of 8 million connecting passengers prepared to switch away from Heathrow is not directly comparable to critical loss calculations. See Footnote 87.

Inbound carriers serving surface and connecting passengers

- 3.180 Unlike based carriers, inbound airlines are in principle more likely to be able to switch away from Heathrow due to lower switching costs, although the loss of revenue from moving a route remains a considerable switching cost. These airlines are more likely to constitute the marginal consumers at Heathrow.
- 3.181 Although short-haul inbound carriers could be able to switch to substitute airports across Europe, and long-haul inbound carriers could be able to switch to another hub or other airport further afield, many of these carriers depend on connecting passenger and cargo feeds, as well as benefit from the alliance-based network effects at Heathrow.
- 3.182 Inbound airlines carrying less than 10 per cent of connecting passengers are likely to constitute the most marginal airlines at Heathrow. However, these only account for a small proportion of Heathrow's total passengers and the airlines carrying most of these passengers are members of an airline alliance, which would increase their switching costs due to the alliance-related network effects at Heathrow.
- 3.183 As with based carriers, passenger switching would be more likely to exert competitive pressure on Heathrow, with connecting passengers being potentially more likely to switch than surface passengers. However, since the marginal airlines at Heathrow carry a small percentage of connecting passengers on their flights, it is not clear whether surface passenger switching would be sufficient to constrain the airport's pricing towards inbound carriers. Further, it is not clear that these marginal carriers account for a sufficiently large proportion of Heathrow's passengers to exert a significant competitive constraint on the airport.
- 3.184 When the passenger-facing and airline-facing aspects of competition are combined, the evidence suggests that Heathrow has a particularly strong market position in respect of network airlines based at the airport, which then supports the airport's strong position for long-haul services.
- 3.185 Heathrow also appears to be in a strong position regarding inbound carriers, in part due to the strength of demand to travel to/from the Heathrow catchment area. While Heathrow is most likely to face competitive constraints from other London airports with regard to holiday and VFR passengers, the actual numbers of passengers switching away appears unlikely to exceed the critical loss required for a price rise to be unprofitable. Additionally, whilst connecting passengers might have a number of relatively close alternatives, the airlines offering carrying these passengers are unlikely to reduce significantly their use of the airport in response to an increase in prices and the potential switching response by the marginal airlines is unlikely to be sufficient to significantly constrain the airport.

Capacity constraints and barriers to expansion

- 3.186 The preceding section considered the responsiveness of airlines and passengers to changes in price, and whether these users would switch in

sufficient numbers to an alternative existing airport to constrain the airport's conduct. However, competitive constraints can also arise from entry and/or expansion of airports in Heathrow's market.

- 3.187 The impact of this form of competitive constraint can be limited by the magnitude of barriers to entry and expansion, and the extent to which capacity constraints limit the ability of airlines to switch away from Heathrow. These factors are considered below.

Barriers to entry and expansion

- 3.188 The CAA's *Guidance on the assessment of airport market power*⁹⁴ states that barriers to entry in airport markets are particularly high and that expansion of existing airports is more likely to represent a competitive constraint on existing airports than the threat of entry by an entirely new airport. New airports can sometimes enter the market⁹⁵, but the lead times involved in new entry are likely significantly to limit the impact of this form of competitive constraint. However, expansion and/or entry by existing aerodromes, and/or the threat thereof, may represent an important source of competitive constraint.

- 3.189 In the context of Heathrow, the barriers to entry are particularly marked, due to a number of factors, including:

- The infrastructure requirements of airlines operating full service business models, carrying connecting passengers and transporting bellyhold cargo; and
- The minimum scale of operation for a hub airport, and the costs that this implies in terms of airport and surface access infrastructure.

- 3.190 This indicates that airport new entry is unlikely to be a significant source of competitive constraint on Heathrow.

- 3.191 Furthermore, chapter 2 discussed the impact that the business models at Heathrow have on the product market, limiting airlines' choice sets to relocate to alternative airports. This same logic implies that the types of airports that might 'enter' the market – i.e. existing aerodromes that do not currently accept significant commercial passenger traffic – are unlikely to be able to invest to offer the product required by the airlines at Heathrow. This supports the view that expansion barriers – when combined with the relevant product market – are such that airport new entry and expansion are unlikely to represent a significant competitive constraint on Heathrow.

- 3.192 We note that there are examples of hub airports that have, in recent years, been significantly expanded, notably those in the Gulf states. However, we do not consider that these examples of entry and expansion would be affected by an increase in prices at Heathrow and, instead, result from long-term, strategic decisions made by these states. Consequently, whilst the

⁹⁴ CAA *Guidance on assessing airport market power* April 2011 Chapter 5

<http://www.caa.co.uk/docs/5/Final%20Competition%20Assessment%20Guidelines%20-%20FINAL.pdf>

⁹⁵ For example, Robin Hood Doncaster Sheffield airport opened in April 2005, and London City Airport opened in 1988.

expansion of these hubs will no doubt affect the market position of Heathrow, they do not appear to be constraints on Heathrow's pricing and service quality in the short or medium term.

- 3.193 Barriers to entry and expansion can affect the competitive constraints faced by Heathrow, as they may create capacity scarcity. The CAA's *Guidance on the assessment of airport market power* sets out different kinds of capacity scarcity, not all of which bestow market power. In the context of the airports in London and the South East of England, and in the UK more generally, the likelihood of new entry in the short to medium is very low, due in part to the very large irreversible investments required, and it is incumbent expansion that would in principle be the most likely source of capacity increase in the airport market.

Capacity constraints

- 3.194 The Annex to this document sets out the capacity constraints at the London airports. It highlights that there is a degree of available capacity at both Stansted and Luton airports, particularly outside of the morning peak periods. It also shows that, whilst Gatwick is taking steps to increase the peak capacity at the airport, there is a position of low levels of available capacity, relative to Stansted, Luton and regional airports.
- 3.195 Heathrow has consistently operated at between 95 and 98 per cent of its runway capacity for the past decade, with very low levels of available capacity. This position has a number of implications for Heathrow. First, Gatwick has some capacity to accept flights that might switch away from Heathrow. However, the limited availability of capacity suggests that this switching would not be particularly significant in the context of disciplining Heathrow's conduct. Gatwick currently has limited peak slot capacity, which might support the relocation of some inbound services to Gatwick – particularly those that do not rely on significant volumes of connecting traffic – but would not appear to allow many airlines to relocate their operations to the airport. For example, the capacity position at Gatwick would not allow a based carrier to relocate a significant part of its existing network to Heathrow.
- 3.196 Second, the airport is likely to face relatively weak incentives to attract new airlines and new routes to the airport; certainly relative to other airports with more available capacity. Indeed, whilst we have seen evidence that Gatwick and Stansted devote significant resources to marketing their airports to airlines, Heathrow confirmed that they did not undertake similar activities. Without a strong incentive to attract new airlines and routes, there is a concern that the airport would be able to increase prices and reduce service quality.

Hub operations

- 3.197 While capacity constraints may reduce competitive constraints on Heathrow with regard to surface passengers, it could in principle increase constraints on the airport in terms of handling connecting passengers, as the airport is considerably more capacity constrained than the other major European hubs. [X] It therefore appears that capacity scarcity constrains Heathrow to be

focused on network and long-haul operations, limiting the number of ‘marginal’ (short-haul) services.

- 3.198 However, although these capacity constraints are likely to limit future growth, they do not seem likely to constrain Heathrow’s pricing power as the large switching costs faced by many, particularly based, airlines at Heathrow and the scarce capacity at other London airports reduce the choice of Heathrow’s airlines.

Summary – impact of capacity constraints

- 3.199 Overall, the balance between demand and available capacity is a significant factor that impacts upon Heathrow’s incentive to compete to attract additional airlines and routes. In addition, the relatively constrained position of Gatwick – which for many airlines is the only credible alternative to using Heathrow – means that capacity constraints limit the potential for airline switching to limit Heathrow’s market power.

Pricing and behaviour

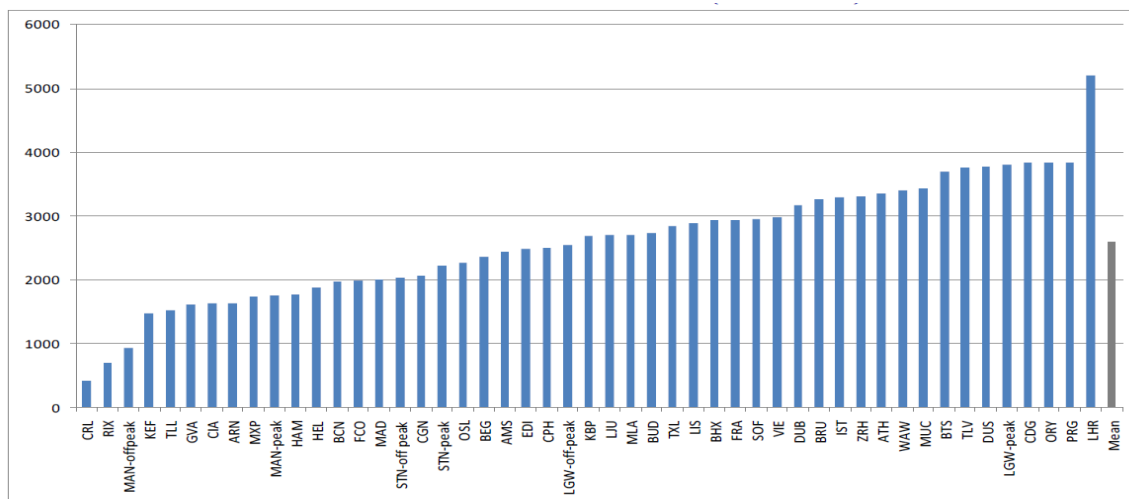
- 3.200 This section considers whether the historical behaviour of Heathrow provides any further evidence on the airport’s market position. Consistent with the views set out in the CAA’s *Guidance on the assessment of airport market power*, the extent to which behavioural evidence can be used to infer conclusions about market power is limited by the presence of detailed economic regulation of much of the airport’s conduct, including pricing, service quality and investment.

Pricing

- 3.201 Demand has remained strong for slots at Heathrow in spite of continually rising airport charges over the past decade. Further, as Figure 24 shows, the combined landing and passenger charges for an A320⁹⁶ are considerably higher than many other major international airports, including the other European hubs.

⁹⁶ The calculation assumes 112.5 passengers being carried on an A320. (ATRS documentation)

Figure 24 Combined landing and passenger charges for Airbus A320 in US\$, 2010⁹⁷



Source: Air Transport Research Society- Benchmarking report highlights presentation 2011, slide 39

- 3.202 Like the other three major European hubs, it does not either undertake peak pricing for landing or departing passengers charges according to time of day or time of year. All users pay tariff rate as set out in Heathrow's Conditions of Use and the airport does not offer any discounts, though there is a differential between connecting and surface passengers and according to whether the flight is to or from a European or Other destination. [X]
- 3.203 Heathrow is also currently pricing to the limit permissible under the price cap regulation. Whilst this is not an indicator of Substantial Market Power, the persistence of this policy contrasts with the position at Stansted, which is jointly owned with Heathrow by BAA. It is also potentially relevant that Heathrow has sustained these prices and enjoyed the lowest proportionate fall in passenger numbers of the major London airports, in recent years.

Service quality

- 3.204 As well as increasing prices, an airport with substantial market power may also reduce service quality. [X] The in-house Quality Service Monitoring (QSM) includes a number of measures set by the CAA as part of its economic regulation of Heathrow. Heathrow is at or slightly above the target levels for the measure of service quality. However, this is not necessarily informative of competitive constraints as Heathrow is given the incentive to reach regulatory targets, meaning that the service quality performance may reflect a response to the price control incentives, rather than being a sign of competitive pressure.
- 3.205 Due to the imposition of service quality targets by economic regulation, it is not necessarily possible to reach a clear conclusion about Heathrow's service quality and the implications with regards to its market power.

⁹⁷ Presentation available on the ATRS website:
<http://www.atrsworld.org/docs/Key%20Findings%20of%20%202011%20ATRS%20Benchmarking%20Project%20-%202027July2011.pdf>

Investment projects

3.206 Heathrow's capital investment is also subject to the incentives created by regulation. For example, it is generally recognised that price controls based on a Regulated Asset Base (RAB) can incentivise airports to over-invest in order to increase the RAB and consequently the price cap. Any evidence regarding the capital investment at Heathrow is therefore unlikely to be particularly revealing of the airport's unconstrained behaviour.

Relationship with airlines and other users

3.207 While the capital investment projects in themselves may not be very revealing about Heathrow's market power, due to the presence of economic regulation, the airport's relationship with its airlines and other users can be an indicator of whether its behaviour is motivated, or facilitated, by substantial market power.

3.208 Airlines have been consistent in describing the lack of consultation or engagement towards them by Heathrow, citing both the airport charges consultation process and changes made to the conditions of use. In the BAA airports market investigation, the Competition Commission considers in detail the nature and processes of BAA's consultation with airlines⁹⁸.

Financial performance

3.209 Heathrow is subject to price cap regulation, which is designed to prevent airports from earning excessive returns. Consequently, analysis of the financial performance of these airports is unlikely to provide particularly strong evidence about their market position, particularly if the airports choose to set their prices at, or near to, the allowed price cap.

The potential for market power to evolve over time

Hub and network airline effects

3.210 In light of the continuing capacity constraints at Heathrow, it appears likely that incumbent based network airlines will continue to focus on deepening their networks. Further, it is possible that more marginal point-to-point short-haul routes may be "squeezed out" to another London airport with capacity. Overall, it appears that there is likely to be further consolidation by existing users at Heathrow as it becomes further oriented towards network and long-haul operations. This would tend to strengthen the market position of the airport, as it becomes increasingly focused on long-haul services where it already has a particularly strong market position. Heathrow's position might, however, weaken if it ceased to be an important hub airport, which would reduce the relevance of airline network effects.

⁹⁸ Competition Commission *BAA airports market investigation* Chapter 7 http://www.competition-commission.org.uk/E81D6513-22ED-4F68-A3E1-A4DE08FE519B/FinalDownload/DownloadId-AAB7EC898D88A3DCA385D75AD122FFC7/E81D6513-22ED-4F68-A3E1-A4DE08FE519B/assets/bispartners/competitioncommission/docs/pdf/non-inquiry/rep_pub/reports/2009/fulltext/545.pdf

Lack of realistic substitutes

- 3.211 A long-term factor contributing to Heathrow's strong market position is the substantial, irreversible capital investments required to enter into the provision of hub services. A new hub airport entry, or a based network carrier moving its large existing hub operations, would be a very long process though it is not impossible. An example is the creation of a secondary hub by Lufthansa at Munich. However, such overseas entry is unlikely to threaten Heathrow's position as the only hub airport in the UK, without realistic substitutes for many of its existing airlines. Further, whilst there is discussion of the potential to construct a new hub airport to the east of London, it is notable that these projects all involve considerable capital investment and lead times. Should one of these projects be pursued, it would have significant implications for the market position of Heathrow in the longer term.
- 3.212 Further, although it competes with the other European hub airports for connecting passengers, each hub is differentiated by its location and based network carriers such that each hub appears to have developed a different geographic route focus. The lack of realistic substitutes either in the UK or further afield seems to offer Heathrow a strong market position from which it is likely to be able to enjoy substantial market power over a medium term period.

Long haul traffic

- 3.213 Heathrow appears to have a strong position with regard to airlines offering long-haul routes, as the data on the distribution of such destinations shows that they are concentrated at the airport. Although there are a number of airlines offering point-to-point long-haul routes at a small number of other London and UK airports, it appears that the reliance of many airlines on connecting passengers flying into Heathrow to obtain a load factor above 80 per cent, as well as the importance of bellyhold cargo to route profitability, precludes substantial expansion of long-haul operations at other airports. For example, there are examples of unsuccessful expansion at other London airports (e.g. MaxJet, EOS at Stansted). However, operators feeding non-UK hubs are growing in importance (e.g. Air Asia X, Singapore, Emirates), which could have an increasing impact on hub competition.

The CAA's initial view on the degree of Heathrow's market power

- 3.214 Overall, the available evidence strongly suggests that Heathrow currently enjoys a very strong market position amounting to Substantial Market Power (SMP) with regard to its overall operation, which is unlikely to weaken considerably in the medium term.
- 3.215 Heathrow's position of Substantial Market Power is related to the following key reasons:
- The majority of Heathrow's airlines are based network carriers and inbound carriers that face very significant switching costs, including those due to the existence of alliance-related network effects at the airport. These airlines rely on significant proportions of connecting

passengers, as well as bellyhold cargo yield on long-haul flights, for the profitability of their operations. The based network carriers are particularly 'captive' at the airport, while the inbound carriers have a wider choice set but still face significant switching costs.

- Although there are marginal airlines - carrying less than 10 per cent of connecting passengers on their flights - that could constrain the airport, these only account for a small percentage of Heathrow's total passengers. Further, a number of these airlines still benefit to an extent from alliance-related network effects. These airlines are therefore unlikely to sufficiently constrain the airport's behaviour towards its more captive airlines, or more generally.
- While the airline 'side' of the market does not appear to constrain Heathrow's pricing behaviour, the passenger 'side' seems more likely to be able to exert significant competitive pressure on the airport. However, Heathrow has a particularly strong market position with regard to business and VFR passengers, who have strong destination preferences. Due to the concentration of long-haul services Heathrow, surface long-haul passengers are generally unable to switch away as substitutable services tend not to be available. Additionally, while surface short-haul passengers appear able to switch to a substitute service at another London airport, they seem unwilling to do so.
- By contrast, connecting passengers are the passengers for which Heathrow appears to face the most competition, principally from the other major hub airports in Europe. However, many connecting passengers at Heathrow seem to have a strong preference to connect through the airport, which would suggest that the potential constraint may not materialise. In addition, the choices of these passengers are affected by airline decisions, and the responsiveness of these passengers does not appear likely to offset the lack of responsiveness of airlines to the airport's pricing.
- Taken together, the willingness and ability of passenger airlines and passengers to switch away is likely to be insufficient to competitively constrain Heathrow. Further, the interdependence between these two 'sides' of the market creates a virtuous circle whereby the airport becomes more attractive to both airlines and passengers, which increases Heathrow's market power.

3.216 Heathrow's position of Substantial Market Power stems from its strong market position as a hub airport with airline network operations, a lack of viable substitutes, and its strong position for long-haul services. However, the nature of airline economics at Heathrow means that the airport's SMP extends also to surface and connecting passengers, short-haul services, and to the airport's operations overall.

3.217 Heathrow's position of Substantial Market Power is unlikely to weaken considerably over the medium term due to the hub and network airline effects at the airport; the lack of realistic substitutes for both passengers and airlines;

and the airport's very strong position with regard to airlines offering long-haul services.

