



# **Guidance on the assessment of airport market power**

**April 2011**

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## Foreword

The Civil Aviation Authority (CAA) has made the goal of improving choice and value for aviation consumers by promoting competitive markets, contributing to consumers' ability to make informed decisions, and protecting them where appropriate one of its four core strategic objectives for the next five years.

While it is clear that promoting competitive markets is the most effective way to achieve best outcomes for consumers, in areas where markets are not competitive, we will act to protect consumers from harm. That action can either be (ex ante) economic regulation or (ex post) investigation of anti-competitive actions - to work out the most appropriate regulatory activity, the CAA undertakes economic analysis of the degree of market power held by the airports in question.

These competition guidelines are designed to support this process and are intended to help stakeholders understand how the CAA will undertake such analysis. They have been developed to complement the CAA's work to regulate airports following the introduction of reforms proposed by Government to modernise the CAA's outdated legislative framework to give us a more flexible set of tools to help place the passenger at the heart of economic regulation. They will also aid regulatory certainty for stakeholders following BAA's sale of Gatwick and the Competition Commission's ruling that BAA must also sell Stansted.

By their nature, competition guidelines are based around broad principles and are designed as a high-level guide to how future in-depth economic analysis will be undertaken. They set out the issues that will be considered as part of future competition assessments and highlight the links between those issues and relevant existing guidance and case law. However, this document is not an attempt to actually make a competition assessment or judge how much market power an individual airport holds, nor does it try to pre-empt the in-depth process of analysis and consultation that would lead to such a judgement being taken.

It is also important to note that this document represents guidance, and though it is expected to be an important part of a future competition assessment, it is possible that reasons to depart from the guidelines will emerge. We would not rule out doing so, and would welcome future input from stakeholders as competition assessments are developed on areas where they feel that we may sensibly take a different approach to the one set out here. If we do decide to depart from the guidelines, we will inform stakeholders and fully explain our rationale for doing so.

The CAA has discussed these guidelines with the UK's general competition authorities, the OFT and the Competition Commission, and we are confident that our approach to drafting them, and in future using them, is in line with their recommended best practice and that of the European Commission.

These guidelines were developed following extensive interactions and consultation with relevant industry stakeholders, and I would like to take this opportunity to thank them both for their time in attending roundtables and bilateral meetings about the guidelines and for submitting extensive and detailed comments to us as we drafted them. Without the input we have received from industry contributors, these guidelines would not be as well developed and effective as they are, so I am grateful for their work.

Iain Osborne, Group Director Regulatory Policy, Civil Aviation Authority

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## 1. Introduction

- 1.1 It is generally accepted that, as in other markets, promoting competitive airport markets is an important way to improve outcomes for users of airports. However, there can be areas where markets are not competitive, and in these cases the CAA has statutory functions to act to protect consumers from harm. That action can take the form of the direct regulation of price, service and investment or investigations into anti-competitive conduct. In both cases, the CAA undertakes economic analysis of the degree of market power held by the airports in question.
- 1.2 These competition guidelines are designed to support this process and are intended to help stakeholders understand how the CAA will undertake such analysis. They complement the CAA's work to regulate airports in a proportionate and effective manner, supported by proposed reforms to modernise the current legislative framework. These reforms would give the CAA a more flexible set of tools and help it to place the passenger at the heart of economic regulation.

### Target audience

- 1.3 The CAA expects to apply these guidelines when it seeks to understand the level and nature of market power enjoyed by an airport. These guidelines would therefore be of use for the following audiences:
- airports that might be subject to a competition assessment, and their advisors;
  - the main user groups of airports (including airlines and passenger representation groups), and their advisors; and
  - practitioners in the field of competition and regulatory policy.

### Purpose of these guidelines

- 1.4 The CAA's current and prospective legal powers allow it to undertake detailed ex ante economic regulation of designated airports and assessments of alleged anti-competitive conduct by UK airports. In making use of these legal powers, economic analysis of the degree of market power, or of the competitive environment of the airports in question, is the first step in the overall assessment. These guidelines are intended to support this analysis, which would inform investigations into:
- which airports should be subject to detailed price and service regulation, either when the CAA is providing advice to the Government on whether an airport should be 'designated' or 'de-designated' for the purposes of price control under section 40 of the Airports Act 1986 ('AA86'),<sup>1</sup> or when the CAA takes a decision on whether an airport

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<sup>1</sup> The current designation criteria determined by Government are that: an airport has, or is likely to acquire, substantial market power; competition law may not be sufficient to address the risk that the airport would increase and sustain prices profitably above the competitive level or restrict output or quality below the competitive level; and the benefits of designation outweigh the costs.

should hold an economic licence under a proposed new regime of economic regulation of airports<sup>2</sup>;

- how to design regulatory approaches that are broadly proportionate to the level and nature of an airport's substantial market power,<sup>3</sup> either under section 40 of the AA86 or under the prospective new regime of economic regulation;
- potentially anti-competitive conduct, under the CAA's powers to investigate airport conduct and impose additional conditions on airports under section 41 of the AA86;<sup>4</sup> and
- the degree of competition faced by airports under the requirements of the European Airport Charges Directive (ACD).<sup>5</sup>

1.5 These guidelines are therefore potentially applicable to the assessment of market power for both designated and non-designated airports in the UK; with a focus on commercial passenger and cargo operations, at any airport passing the relevant thresholds for the CAA's powers.<sup>6</sup>

1.6 This document does not provide guidance on the processes that the CAA expects to follow when undertaking these assessments. Further information about these processes can be found in the following documents:

- advice to the Government on the designation of airports: the DfT's *decision on proposed designation and de-designation criteria for airports*, published in May 2007;<sup>7</sup>
- complaints under section 41 of the AA86: *the CAA's use of section 41 of the AA86: the CAA's policy and processes*, published in December 2006;<sup>8</sup> and
- competition assessments under the ACD: the CAA set out its emerging thinking on the implementation of the ACD in the UK in December 2010.<sup>9</sup>

In addition, in respect of airport price and service regulation, the CAA sets out its intended process at an early stage of each review.

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<sup>2</sup> The Queen's Speech, 25 May 2010, available at <http://www.number10.gov.uk/queens-speech/2010/05/queens-speech-airport-economic-regulation-bill-50633>; and written ministerial statement by the Secretary of State for Transport, 21 July 2010, available at <http://www.dft.gov.uk/press/speechesstatements/statements/hammond20100721>.

<sup>3</sup> This would follow the designation (or licensing under the prospective new legislation) of an airport.

<sup>4</sup> Section 41 of the AA86 provides the CAA with the power to impose conditions on airports holding a permission to levy airport charges for the purpose of remedying or preventing a number of forms of conduct. In general terms, these forms of conduct reflect those that a dominant airport would, under UK and EC competition law, be prohibited from pursuing.

<sup>5</sup> Directive 2009/12/EC of the European Parliament and of the Council of 11 March 2009 on airport charges, Article 6.5(b).

<sup>6</sup> The CAA will have powers under the ACD for airports with more than 5 million annual passengers. The CAA's powers under the AA86 extend to all airports at which annual turnover has exceeded £1 million in two of the last three financial years.

<sup>7</sup> Available at

<http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/consultations/archive/2007/designationdedesignationairports/consuldecisionairports>

<sup>8</sup> Available at <http://www.caa.co.uk/docs/5/ergdocs/section41policy.pdf>

<sup>9</sup> CAA *Implementing the Airport Charges Directive in the UK – CAA Emerging Thinking*, December 2010, available at <http://www.caa.co.uk/docs/5/ergdocs/20101207ACDEmergingThinking.pdf>.

- 1.7 In general terms, the CAA expects to follow the guidelines published by the Office of Fair Trading (OFT) and the European Commission (EC)<sup>10</sup> for the assessment of market power. These are generic guidelines for use in any industry and provide a useful starting point for assessing the degree of competition faced by an airport. The CAA sees no reason to depart from these guidelines and instead focuses on how they might apply to airports and the particular issues that arise when doing so. Reflecting this, these guidelines draw upon the material set out in the OFT's guidelines on market definition (OFT 403)<sup>11</sup> and on assessing market power (OFT 415)<sup>12, 13</sup>.
- 1.8 This document therefore identifies and sets out how a number of sector-specific issues might affect the assessment of an airport's market power. Such an assessment will need to reflect the particular circumstances of the airport in question, and the purpose of the assessment. Consequently, the approach set out in these guidelines might not be appropriate in some specific circumstances. In such cases, the CAA would expect to set out its reasons for departing from these guidelines.

### **Proposed reforms to the CAA's powers**

- 1.9 As mentioned in paragraph 1.4 above, the Government is currently considering introducing legislation that would reform the framework for the economic regulation of airports. The following elements in the reform package currently being considered would be likely to have implications for the context in which the CAA would, in the future, carry out competition assessments:
- the CAA would have powers to determine which airport should hold an economic licence, replacing the current system of designating airports for price control by the Secretary of State; and
  - the CAA would be granted concurrent competition powers, replacing its current powers to investigate anti-competitive airport conduct under section 41 of the AA86.
- 1.10 When these powers are introduced, these guidelines would need to be reviewed and, if necessary, amended, to fit the new legislative framework.
- 1.11 During their development the CAA discussed these guidelines, at staff level, with the OFT and the Competition Commission. While the CAA considers that these guidelines are consistent with the OFT and EC guidelines and best practice, this document is a statement of CAA policy.

<sup>10</sup> European Commission, DG COMP, *Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings* (2009), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:045:0007:0020:EN:PDF>

<sup>11</sup> OFT *Market Definition* guideline (OFT403), [http://www.offt.gov.uk/shared\\_offt/business\\_leaflets/ca98\\_guidelines/oft403.pdf](http://www.offt.gov.uk/shared_offt/business_leaflets/ca98_guidelines/oft403.pdf)

<sup>12</sup> OFT *Assessment of market power* guideline (OFT415), [http://oft.gov.uk/shared\\_offt/business\\_leaflets/ca98\\_guidelines/oft415.pdf](http://oft.gov.uk/shared_offt/business_leaflets/ca98_guidelines/oft415.pdf)

<sup>13</sup> The CAA's competition assessment guidelines are only intended for use in assessing the degree of an airport's market power. They will not be used for the assessment of whether an airport's conduct would amount to abusive behaviour, either under EU or domestic UK competition law or under section 41 of the AA86. Equally, these guidelines are not intended for use in establishing the specificities of how to regulate designated UK airports.

### **Structure of the guidelines**

1.12 The guidelines are structured in six further chapters. Chapter 2 sets out some of the overarching concepts relating to and the scope of market power assessments. The subsequent chapters then set out the elements that a market power assessment is likely to include, namely:

- Chapter 3: Understanding the relevant markets;
- Chapter 4: Market structure and market shares;
- Chapter 5: Barriers to entry and expansion;
- Chapter 6: Airline buyer power; and
- Chapter 7: Other factors.

### **Other related papers**

1.13 In developing these competition assessment guidelines, the CAA has produced working papers on the empirical methods that may be used for geographic market definition and analysing airport behaviour, performance and profitability. These are available on the CAA website.<sup>14</sup>

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<sup>14</sup> <http://www.caa.co.uk/default.aspx?catid=5&pagetype=90&pageid=586>

## 2. Assessment framework

2.1 The objective of a competition assessment is to establish the existence and strength of the competitive constraints facing an airport, and consequently to understand the nature and extent of its market power. These guidelines set out how the CAA expects to explore the constraints on the behaviour of an airport, and assess whether these are sufficiently strong to prevent prices rising above, and investment or service quality falling below, reasonable levels.

2.2 This involves assessing two main issues:

- First, it is important to understand the degree to which users can respond to a failure to provide a reasonable price-service offering and discipline airports' behaviour through their ability to reduce their use of the airport. This ability of users to go elsewhere, or to switch business away from the airport, is likely to depend on a number of factors, which a competition assessment seeks to explore in a structured manner.
- Second, it is important to understand the impact that these responses might have on the behaviour of the airport, and whether they sufficiently discipline the airport's pricing, investment and provision of service quality.

2.3 In this way, a competition assessment captures the various ways in which an airport's behaviour is constrained, including by the switching behaviour of an airport's users, which is affected by a number of factors, including the presence of other competitor airports in the market.

2.4 Before considering these individual factors in detail in the following chapters, it is necessary to define and outline a number of general issues that underpin all aspects of a competition assessment. These are:

- the importance of an evidence-based approach;
- the concept of market power, including:
  - how market power relates to the concept of Substantial Market Power (SMP) and dominance; and
  - collective dominance;
- the concept and sources of competitive constraints; and
- the focus of individual assessments.

The CAA's views on these issues are discussed in the remainder of this chapter.

### Evidence and the assessment of market power

2.5 The CAA does not expect there to be a single piece of definitive evidence on which to base an assessment of airport market power. Instead, the CAA will reach a decision after considering all of the available evidence in the round, drawing upon a range of different analytical techniques, and using its judgement to reach an overall conclusion.

- 2.6 The evidence considered by the CAA during a competition assessment can, and is expected to, be both quantitative and qualitative in nature. The weight placed on a particular piece of evidence will vary depending upon the uncertainty attached to it and its relevance to the particular case being analysed. This is in line with the EC's approach to empirical evidence on substitutability:

*“there is a range of evidence permitting an assessment of the extent to which substitution would take place. In individual cases, certain types of evidence will be determinant, depending very much on the characteristics and specificity of the industry and products or services that are being examined. The same type of evidence may be of no importance in other cases. In most cases, a decision will have to be based on the consideration of a number of criteria and different items of evidence. The Commission follows an open approach to empirical evidence, aimed at making an effective use of all available information which may be relevant in individual cases. The Commission does not follow a rigid hierarchy of different sources of information or types of evidence.”<sup>15</sup>*

### **The concept of market power**

- 2.7 When assessing the degree of current and/or prospective market power it is important to be clear about what is meant by ‘market power’, and how this relates to the concepts of ‘substantial’ (or ‘significant’) market power and dominance.

#### *Market power*

- 2.8 Market power is defined by the EC, and similarly by the OFT, as follows:

*‘Market power is the power to influence market prices, output, innovation, the variety or quality of goods and services, or other parameters of competition on the market for a significant period of time.’<sup>16</sup>*

- 2.9 However, the existence of some degree of market power is not necessarily problematic, and can be a normal feature of a well-functioning market. Consequently, the CAA will not be assessing whether an airport does or does not have market power. Rather, the CAA will be assessing the **degree** of market power held by an airport and, in particular, whether an airport has substantial (or ‘significant’) market power.<sup>17</sup>

#### *Substantial market power (SMP) and dominance*

- 2.10 The CAA's policy is to apply section 41 of the AA86 in accordance with the principles of UK and EC competition law. Consequently, the prohibited forms of conduct under section 41 of the AA86 broadly equate to the forms of conduct that would constitute an abuse of a dominant position. Furthermore,

<sup>15</sup> European Commission DG COMP *Commission notice on the definition of relevant market for the purposes of Community competition law* (97/C 372/03) paragraph 25.

<sup>16</sup> European Commission, DG COMP *Discussion paper on the application of Article 82 of the Treaty to exclusionary abuses* December 2005.

<sup>17</sup> The OFT notes in its *Assessment of Market Power* guideline (OFT415) that “market power is not an absolute term but a matter of degree, and the degree of market power will depend on the circumstances of each case” (paragraph 2.10).

the DfT's criteria for assessing whether an airport should be designated refer to whether the airport has, or is likely to have, a position of substantial market power (SMP).

- 2.11 Reflecting the relevant case law, the CAA considers that the level of market power enjoyed by a dominant undertaking is equivalent to SMP.

#### *Collective dominance*

- 2.12 The OFT considers that "a dominant position may be held collectively when two or more legally independent undertakings are linked in such a way that they adopt a common policy on the market."<sup>18</sup>
- 2.13 The CAA has not identified any aspects of the airports market that require a departure from the approach taken by the EC and the OFT to assess collective dominance and will, therefore, follow the approach established in the relevant case law.

#### **The concept and sources of competitive constraints**

- 2.14 The OFT describes competitive constraints as "market factors that prevent an undertaking from profitably sustaining prices above competitive levels".<sup>19</sup> To assess the degree of market power held by an airport, a competition assessment aims to capture the existence and strength of all competitive constraints affecting the airport in question.
- 2.15 Competitive constraints can arise from three broad (following the OFT's guidelines):
- existing competitors: other airports that compete with the airport in question to attract passengers, airlines and other airport users;
  - potential competition: the threat that other airports or service providers could start competing with the airport in question for passengers, airlines and other airport users; and
  - buyer power: the discipline exerted on the airport by its users who enjoy a strong negotiating position.
- 2.16 Evidence about the switching behaviour of airport users is an important element informing the assessment of any competitive constraints. Further factors - for example the application of economic regulation on, or the behaviour and performance of, the airport in question - provide further evidence about whether the airport can exploit a position of market power.

#### **Focus of individual competition assessments**

- 2.17 The CAA's analysis of airport market power will vary depending upon the precise issue being analysed. However, in general terms, when considering issues under its powers provided by section 41 of the AA86, the CAA will principally analyse the degree of market power enjoyed by an airport

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<sup>18</sup> OFT *Abuse of a dominant position* guideline (OFT402), paragraph 4.24  
[http://oft.gov.uk/shared\\_oft/business\\_leaflets/ca98\\_guidelines/oft402.pdf](http://oft.gov.uk/shared_oft/business_leaflets/ca98_guidelines/oft402.pdf).

<sup>19</sup> OFT *Assessment of Market Power* guideline (OFT415), paragraph 3.2.

historically and at present, due to the *ex post*, or backward-looking, nature of these powers.<sup>20</sup>

- 2.18 When considering whether or how best to regulate an airport, it will be important for the CAA to understand the likely degree of market power that an airport may have in future, albeit that evidence about the degree of market power currently and previously held would also inform this assessment. It follows that in undertaking this assessment the CAA will need to take account of, and attach particular importance to, evidence about future developments in the market and their potential implications for a market power assessment.
- 2.19 A competition assessment may also be informed by the purpose to which the analysis will be put. For example, a market power assessment for a price control will tend to consider a wide range of services provided by an airport, whilst an investigation into a specific form of conduct might reasonably have a more narrow focus.

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<sup>20</sup> The *ex post* nature of the analysis in the context of an anti-competitive behaviour complaint is such that forward-looking analysis would not be undertaken.

### 3. Understanding the relevant market(s)

- 3.1 This chapter explains the importance of understanding the relevant markets in which an airport operates, in order to aid the assessment of the existence and strength of competitive constraints faced by an airport.
- 3.2 Many of the elements set out in this chapter will also be relevant for the wider question of assessing competitive constraints. To avoid duplication, material included in this chapter is not repeated in the later chapters. However, evidence relevant to the definition of the relevant market(s) may also need to be considered as part of the broader analysis of competitive constraints.

#### Purpose of market definition

- 3.3 As set out in chapter 2, defining the relevant market(s) as a first step of a competition assessment is standard practice in competition analysis. Market definition provides a context for competition analysis by setting out the relevant set of products and geographic areas which encompass the closest substitutes for the products and services of interest in a particular assessment. An airport's market power and competitive constraints can then be assessed by reference to this market.
- 3.4 However, the CAA agrees with the OFT's statement that "the relevant market is in practice no more than an appropriate frame of reference for analysis of the competitive effects."<sup>21</sup> As such, market definition is not an end in itself. Indeed, the way in which the evidence is organised should not affect the results of a competition assessment. The CAA expects to define the relevant market for each individual case based on its facts, as conditions of competition will depend upon the particular case. This is consistent with best practice set by the UK's and EU's competition authorities.
- 3.5 The definition of relevant markets does not preclude the consideration of evidence regarding competitive constraints that originate from outside this market. In some circumstances it might also be difficult to define a market well enough to distinguish clearly between competitive constraints originating from outside or within it. The CAA will therefore consider the cumulative impact of competitive constraints in the round, irrespective of whether they arise from within or outside of the relevant market.

#### The elements of market definition

- 3.6 Markets are generally defined in two different dimensions:
- definition of the relevant product (or service); and
  - definition of the relevant geographic dimension.
- 3.7 According to the EC's *Notice on the definition of a relevant market for the purposes of Community competition law*, the definition of a relevant product market is as follows:

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<sup>21</sup> OFT *Market Definition* guideline (OFT403), paragraph 2.6.

*"A relevant product market comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products' characteristics, their prices and their intended use."*<sup>22</sup>

3.8 The relevant geographic market is defined as follows:

*"The relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas"*.<sup>23</sup>

3.9 Before considering in detail the aspects of product and geographic market definition, this chapter first outlines three overarching issues that are relevant to both product and geographic market definition. The chapter is structured as follows:

- the Hypothetical Monopolist/SSNIP test;
- the assessment of the competitive price level;
- the implications of the interdependence of demand between different airport user groups (multi-sided markets);
- the product market, including the ability of airport users to switch away; and
- the geographic market, including the ability of airport users to switch away.

### **The hypothetical monopolist (HM) test**

3.10 In defining the relevant market, the conceptual framework of the hypothetical monopolist (HM) test often provides a useful starting point. The test seeks to establish the smallest set of substitutes to the product (or product group)<sup>24</sup> and the smallest geographic area for which a hypothetical monopolist controlling that product group (and/or that area) could profitably sustain a small but significant non-transitory price increase (SSNIP) above the competitive price level.

3.11 The OFT normally considers a price increase of five to ten percent above the competitive level to be small but significant, in line with the European Commission's *Notice on the definition of the relevant market*.<sup>25</sup> The CAA expects to apply the general framework of the HM test in the context of market definitions for airports.

3.12 The profitability of a price increase will depend on:

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<sup>22</sup> European Commission, DG COMP *Commission notice on the definition of relevant market for the purposes of Community competition law* (97/C 372/03) paragraph 7.

<sup>23</sup> European Commission, DG COMP *Notice on the definition of relevant market for the purposes of Community competition law* (97/C 372/03) paragraph 8.

<sup>24</sup> In the case of airports, these "products" are more likely to be a range of different services, or service bundles, but for sake of consistency with standard guidelines these guidelines will retain the references to products and product markets.

<sup>25</sup> European Commission, DGCOMP *Commission Notice on the definition of relevant market for the purposes of Community competition law* (97/C 372/03), paragraph 17, available at [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997Y1209\(01\):EN:HTML](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997Y1209(01):EN:HTML).

- the ability of consumers to switch between different products and different suppliers (also referred to as demand-side substitution);
  - the ability of new suppliers (airports) to start providing products that could be considered to be within the relevant market (referred to as supply-side substitution); and
  - the impact of this substitutability on the profits of the HM.
- 3.13 However, the CAA agrees with the OFT statement that “it should be emphasised that defining a market in strict accordance with the test’s assumptions is rarely possible.”<sup>26</sup> Consequently, rather than leading to a precise, data-driven market definition, the approach that the CAA expects to take will result in a structured assessment of available evidence - which may also include qualitative evidence - and a market definition that is consistent with the principles of the HM framework, which can then be used alongside other evidence to assess competition. Nevertheless, wherever analysis of relevant and robust quantitative evidence is possible, the CAA intends to include this in its assessment, alongside qualitative analysis.
- 3.14 The CAA expects to adopt a period of one year as the normal starting point for an assessment of the likely response to a “non-transitory” increase in price, which is in line with the OFT’s guidelines on market definition. However, where there could be meaningful demand-side responses over shorter or longer time periods, the overall competition assessment will take account of this.

### **The “competitive” price level for airports**

- 3.15 The HM framework refers to the assessment of the impact of raising prices above the competitive level. The CAA considers that the prevailing or historical price levels and structures may not always be a good indicator of the competitive price level, due to the presence of regulation<sup>27</sup> and the potential for one or more airports to have SMP.
- 3.16 The CAA agrees with the OFT’s statement that “where prices are likely to differ substantially from their competitive levels, caution must be exercised when dealing with the evidence on switching patterns as such evidence may not be a reliable guide to what would occur under normal competitive conditions.”<sup>28,29</sup> It can, therefore, be important to understand how prevailing and historical prices relate to the competitive price level.
- 3.17 When assessing the competitive price level, the CAA considers it important to take account of the effects of the capital-intensive nature of airports and of the ‘lumpiness’ of capacity increments on prices. In principle, short-run prices in a well-functioning airport market would be expected to fluctuate

<sup>26</sup> OFT *Market Definition* guideline (OFT403), paragraph 2.10.

<sup>27</sup> Price regulation may affect the prices charged by both the regulated airport and unregulated airports. In principle, regulated prices might be above, below or approximately equal to the competitive level.

<sup>28</sup> For example, product markets could be defined excessively broadly on the basis of the prevailing price level if this is above the competitive level due to pre-existing market power of the undertaking(s) in the market. This is referred to as the Cellophane Fallacy, after the case *US vs. El Du Pont de Nemours & Co* [1956] 351 US 377.

<sup>29</sup> OFT *Market Definition* guideline (OFT403) paragraph 5.6.

around a long-term average level, which reflects the efficient cost of expansion and/or entry in the market.<sup>30</sup> This potential for prices to vary over time may limit the ability to determine the competitive price level with a significant degree of accuracy. However, the CAA expects to analyse this long-term average price level using measures of long-run, forward-looking, cost such as depreciated replacement or incremental cost. These cost measures may differ significantly from the level of average cost implied by statutory or regulatory accounts.

- 3.18 Further, analysis of the competitive price level is complicated by the fact that airports can be said to face interdependent demand from different user groups and that, instead of a single price, airports generally levy a number of different charges for different services to different users.
- 3.19 The CAA considers that it is important to understand, at a minimum, whether there is evidence that the prevailing and historical price levels are reasonably close to, or significantly above or below, the competitive level. Given the difficulties involved in establishing a competitive price level, it might not always be possible to derive an accurate measure. Nevertheless, where sufficient and robust evidence is available to determine a reasonable estimate, the CAA expects to take full account of it.

#### **Interdependence between demand from different user groups**

- 3.20 Airports face demands from several user groups – including airlines, passengers, cargo shippers and retailers<sup>31</sup> - that are likely to be somewhat interdependent. For example, an increase in airline charges would affect not only airline demand but also, indirectly, that of passengers and retailers. As a result, when setting prices and making investment decisions, airports would be expected to take account of the impact on demand of all user groups. Consequently, airport price structures are likely to depend on each demand group's own- and cross-price elasticities, and individual prices may not necessarily reflect the costs directly associated with supplying to (or allocated to) that group.
- 3.21 An airport's user groups can therefore be considered to constitute different 'sides' of the airport market, with the potential for significant interactions between the prices charged to one 'side' and the demand from users on the other 'sides' of the market. In this way, an airport can be viewed as a platform in a multi-sided market.

#### *Implications of demand interdependence for a competition assessment of airports*

- 3.22 Analysing airports as multi-sided platforms has implications for market definition and the overall competition assessment. However, the impact of viewing airports in this context will depend upon the evidence on the strength of interrelationships between the various 'sides' of the platform.

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<sup>30</sup> Where demand is unlikely to increase and the available capacity exceeds demand, long-term average competitive prices may be significantly lower than the levels that might support entry and/or expansion.

<sup>31</sup> As discussed later in paragraph 3.48, the term 'retailers' denotes a range of different types of service providers at an airport.

- 3.23 One important feature of multi-sided markets is the presence of indirect externalities arising between one demand group and another, in response to a change in price.<sup>32</sup> However, the strength of these feedback effects could vary for different sides of the market and need not be symmetrical.<sup>33</sup> They might also vary by airport. Analysis of a multi-sided market should take account of any interactions and interdependencies between the various sides of the market for the airport in question. The extent to which common (one-sided) market definition methods need amending will depend on the strength of the interrelationships between the various sides of the market.
- 3.24 The potential multi-sided nature of airports is one aspect of airport markets that is likely to complicate the quantitative application of the HM/SSNIP test and the determination of a competitive price level. First, multi-sidedness would tend to increase the information needed to account for the feedback effects and calculate the cross-price elasticities between the different sides of the market. Second, as mentioned in paragraph 3.20, the interdependencies between each side of the market might lead to the prices for the different sides of the market diverging from the underlying costs of the services provided to that side.<sup>34</sup>
- 3.25 Furthermore, there are many different combinations in which the airport could increase its prices overall by the benchmark level of five to ten percent. EC case law on two-sided markets states that it would not always be appropriate to increase all prices across a platform by the same percentage, as this would disregard the existence of different demand groups and their interactions.<sup>35</sup> However, there is currently no widely accepted standard method for carrying out the HM/SSNIP test for a multi-sided market. Consequently, adopting an approach in line with that previously taken by the OFT<sup>36</sup>, the CAA expects first to assess the impacts of raising prices to each side of the market individually, while accounting for the feedback effects on other sides of the market. Second, on the basis of the findings from the first step and any evidence about the different user groups' price elasticities, the CAA would consider whether there is evidence to suggest that a price rise would take a particular structure (i.e. which combination of price rises would be most likely to be profitable for the airport) and, if so, use this as the basis for the market definition exercise.

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<sup>32</sup> For example, increasing aeronautical charges to airlines might result in lower airline demand, which would also lower passenger demand and consequently retail demand.

<sup>33</sup> For example, the interdependence of demand between airlines and passengers would be expected to be stronger than between airlines and retailers. Furthermore, the willingness of retailers to open an outlet may be strongly influenced by the volume of passengers at the airport, whereas passengers might be comparatively less influenced by the presence of retailers in their choice of airport.

<sup>34</sup> This is a common feature in multi-sided markets. Evans and Schmalensee (2007) discuss this in the context of media markets: "most advertising-supported media earn much of their revenues – and probably all of their gross margin – from advertisers. Print media [e.g. newspapers] are often provided to readers at something close to or below the marginal cost of printing and distribution." Evans D and Schmalensee R (2007) "The industrial organisation of markets with two-sided platforms" *Competition Policy International* Vol.3 No.1 Spring 2007.

<sup>35</sup> *Mastercard vs. Commission*, Comp/34.579, 2001, paragraph 264.

<sup>36</sup> *OFT Investigation of the multilateral interchange fees provided for in the UK domestic rules of Mastercard UK Members Forum Limited (formerly known as MasterCard/Europay UK Limited)*, Case No CA98/05/05, 2005, paragraph 164.

- 3.26 The above approach is likely to be complicated by data restrictions, and it might not be possible to establish the strength of the relationships between different sides of the market with a high degree of precision. However, the CAA expects to explore these relationships and where there is good evidence of the strength of these relationships, or of the particular form a price rise might take, would take this into account in its analysis.

### **Product market definition**

- 3.27 There are two main sources of competitive constraints on firm behaviour that are captured in the market definition exercise:

- users switching between current suppliers of a given product or to current suppliers of closely related products (referred to as ‘demand-side substitutability’); and
- producers that do not currently supply a product might be able to start supplying it within a relatively short time frame, without incurring significant sunk costs (referred to as ‘supply-side substitutability’).

Other forms of competitive constraints are considered as part of the wider assessment of market power.

- 3.28 This section discusses demand-side and supply-side substitutability with regards to the product market definition. As airport users may make choices based on a combination of price, product and geographic considerations (as described in paragraphs 3.36-3.37 3.42 and 3.46), when understanding the relevant markets it is important to consider the relationship between the product and the geographic market definitions. Furthermore, the drivers of demand-side substitutability discussed in this section are also likely to be relevant for geographic market definition.

### *Demand-side substitutability*

- 3.29 As set out in paragraph 1.5, the focus of these guidelines is on commercial passenger and cargo operations at airports. This suggests that typically an airport’s main user groups could be distinguished as:

- passengers;
- cargo shippers;
- airlines (transporting passengers, cargo, or both); and
- retailers.

The following subsections focus on these four groups. Some airports may also have significant shares of other types of users, for example General Aviation, that a market definition would need to take into account. These other airport user groups are considered in chapter 7.

- 3.30 While there might be a significant overlap in demand for certain airport services between airlines transporting either or both passengers and cargo (e.g. the use of the runway and associated infrastructure), these airlines serve very different customer groups (passengers and cargo shippers) that have significantly different characteristics and requirements for airport

services (e.g. the requirement for a cargo warehouse versus a passenger terminal). For this reason, these guidelines distinguish between passenger and cargo carriers, with cargo airlines and shippers being discussed in the subsection on cargo.

- 3.31 The product market may vary with the composition and characteristics of these user groups, as they may have differing perspectives on the set of alternatives that are reasonably close substitutes for a given airport, not least because they each are likely to consume different airport services.
- 3.32 There is a range of possible responses by airport users to an increase in airport prices. It is possible to assess their ability to substitute between the different options by setting out their choice sets and considering the costs associated with each possible choice. Further, by understanding the alternatives available to each user and the likelihood of them switching to these alternatives, it should be possible to assess the overall competitive constraint faced by an airport. Typically, a greater availability of substitutes and a lower level of switching costs would decrease the level of market power held by an airport. Figures 1 and 2 in Annex A provide an overview of the possible ways in which passengers and airlines may react to a change in airport prices.
- 3.33 The CAA, therefore, considers that it will be important to assess demand-side substitutability for each user group individually, while accounting for any interactions between these groups, and to examine whether this implies that the supply of airport services to each of these groups might constitute a different product market.

#### Passengers

- 3.34 The product market definition will be affected by the ability and willingness of passengers to switch between airports. This will depend in part on the degree to which they view services at different airports as reasonably close substitutes, which can differ between different passenger types. The characteristics of an airport's current and prospective passengers can therefore affect the strength of the competitive constraints that it faces.
- 3.35 The CAA agrees with the OFT that, "it is not necessary for all customers, or even the majority, to switch. The important factor is whether the volume of purchases likely to be switched is large enough to prevent a hypothetical monopolist profitably sustaining prices 5 to 10 % above competitive levels."<sup>37</sup> In this context, it may be important to consider whether an airport can effectively differentiate between different passenger groups, as discussed later in paragraph 3.52.
- 3.36 Passenger types can be differentiated according to a number of different factors, which are also likely to affect their switching costs and the geographic market definition. The CAA considers that the most relevant factors are likely to be:

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<sup>37</sup> OFT *Market definition* guideline (OFT403) paragraph 3.4.

- journey purpose: typically, distinctions can be made between passengers travelling for leisure, business, or visiting friends and relatives;
- flight distance: passenger preferences may vary according to the length of their flight, and it may be useful to consider the differences between passengers travelling to short-haul and long-haul destinations<sup>38</sup>, or differences between domestic, intra-EU, and international services;
- time sensitivity of passengers: this is likely to be dependent on, or related to other passenger characteristics such as the journey purpose and/or the flight distance;
- whether passengers are connecting through an airport (i.e. transit and transfer passengers) or are starting or ending their journey by air at the airport (local passengers);
- whether passengers are inbound (i.e. the airport is the destination airport) or outbound (i.e. the airport is the passenger's point of origin) passengers;
- the preferred level of airline service quality both on board and at the airport, for example premium products such as airport lounges<sup>39</sup>; and
- sales channel and the use of intermediaries: a number of intermediaries can be involved in the choice and sales process of a flight (and, by extension, the choice of airport), including online and high street travel agents and corporate travel offices. Flights can also be part of a holiday package sold by a tour operator. The involvement of intermediaries in the choice process for a particular flight and airport might affect the choice sets and switching ability of passengers.

3.37 An important element of a competition assessment will be to understand passengers' ability to switch between airports. This will depend upon the above characteristics, as well as the availability of suitable alternatives at other airports and the price and/or service quality of these alternatives. Overall, passenger switching will be affected by the costs that they face in switching their demand to their next best alternative. Figure 1 in Annex A provides a qualitative overview of possible choices that passengers may face and the kind of switching costs that might be associated with different choices. These switching costs are likely to depend on some, or all, of the following:

- the availability of suitable alternative flights, which may or may not be to the same destination. The dynamic nature of the airline route market will also need to be taken into account when assessing an airport's market power, since the routes operated to and from an airport could change;

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<sup>38</sup> Distinctions on the basis of mileage thresholds are inevitably somewhat arbitrary, and the CAA would expect to undertake sensitivity analysis whether various sector lengths would significantly affect the results of its assessment.

<sup>39</sup> This also relates to the various airline business models, discussed later in paragraph 3.40.

- the use of intermediaries, including travel agents, tour operators and corporate travel offices;
- differences in overall travel time and costs;
- the potential for, and degree of, substitution to and from other types of transport, notably from air travel to road or rail;
- the potential for the presence, and range, of suitable retailers at the alternative airports to affect decisions;
- the cost of searching for alternatives; and
- the existence of agreements or relationships between corporations and airlines that can affect the willingness or ability of passengers to switch to alternative services.

3.38 The characteristics of current and prospective passengers are likely to vary between airports, and it may not be necessary to analyse all of the above passenger characteristics for each airport. In practice, the CAA expects to understand the main characteristics of the passengers who use or who might use a particular airport and focus its analysis on understanding the impact of these passengers' characteristics on the airport's market power.

#### Passenger airlines

3.39 The previous subsection has already set out a number of different aspects of airline services that are likely to play an important role in understanding the strength of competitive constraints faced by a given airport (see paragraphs 3.36-3.37). In general, the characteristics and requirements of airlines, in particular regarding passenger-facing airport services and facilities, are likely largely to be aligned with those of their main passenger groups.

3.40 Historically it has been common to distinguish between three main airline business models: 'full service' or 'legacy' carriers; 'no frills' or 'low cost' carriers, both of which offer scheduled services; and charter carriers, traditionally used by tour operators for package holidays. However, the boundaries between the various airline business models are becoming increasingly blurred, with 'full service' carriers adopting pricing structures introduced by 'low cost' carriers, and some 'low cost' carriers offering additional 'frills' such as loyalty programmes, assigned seats or fast track boarding. Charter carriers, on the other hand, also sell seat-only flights, whilst some no-frills carriers also sell accommodation through their websites. A further distinction exists between point-to-point services and network services, in that the latter involves airlines actively facilitating connections between two individual flights - whether wholly on their own services, or in conjunction with the services of other airlines - to provide for a large number of possible of origin/destination combinations, often with short haul flights 'feeding' the airline's long haul flights.

3.41 Airlines' requirements regarding an airport's infrastructure are likely to differ according to their business model and the type of services they offer. In addition, both the business model and the type of services are also likely to

affect the type of aircraft used by the airline, which might require specific airport facilities.<sup>40</sup>

3.42 Generally, an airline's ability and willingness to switch all or part of its operations, including any incremental growth, between airports will depend upon the overall differences in the costs of operating at each airport and the difference between the likely revenues generated on routes from and to the various airports, including any steps that alternative airports might take to reduce the net costs of switching services (such as any discounts or marketing support). The CAA considers that the nature and magnitude of switching costs faced by airlines is an important aspect of the overall competition assessment, potentially taking into account, but not limited to:

- the availability and configuration of infrastructure at an airport;
- the airline's business model and type of services offered by the airline, as discussed above;
- the willingness of the airline's main passenger groups to switch airports, or the presence of sufficient passenger demand at alternative airports;
- the degree of potential competition from other airlines at alternative airports;
- the availability and/or cost of sufficient slot capacity at alternative airports;
- the costs of setting up operations at alternative airports and of decreasing/closing operations at the current airport;
- the potential for, and strength of, substitution to and from other types of transport, in particular between rail and domestic or short-haul flights; and
- the potential impact of cargo services on the profitability of routes from/to particular airports.

#### Cargo services

3.43 Airports may also provide aeronautical infrastructure services to cargo shippers and cargo carriers. As discussed above, while it is likely that there will be an overlap in the demand for some airport services, the nature of services required by cargo carriers for the processing of cargo is different from the services required for the processing of passengers. This section sets out the issues in product market definition for both cargo-shipping end consumers and cargo carriers. However, in general terms, the demand-side characteristics of these two user groups can be analysed separately, analogous to the assessment of passenger airlines and passengers.

3.44 The demand for airport cargo services is likely to reflect the business models of carriers transporting cargo and the demand from cargo shippers (and, ultimately, consumers' demand for shipping services). The extent to which

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<sup>40</sup> For example, the largest passenger aircraft A380 is currently used by network carriers on long haul routes and requires a special runway certification and terminal configurations.

cargo carriers and shippers view different airports as substitutes is likely to depend upon:

- the cargo airline business models – there are generally three types of air cargo carriers: combination carriers (carrying cargo in the bellyhold of passenger aircraft and also potentially operating some cargo-only flights), all-cargo airlines and ‘integrators’<sup>41</sup>. Cargo-only flights often use large aircraft that have specific minimum infrastructure requirements, potentially including specialist loading and transfer equipment;
- the characteristics of cargo shippers – cargo may be shipped by individuals, companies or professional logistics companies (forwarders). Some integrators might also dispatch some of their cargo on other cargo carriers. Unlike the passenger market, the end consumers rarely come into direct contact with the airport itself but only deal with a forwarder or integrator away from the airport; and
- the nature of the product being shipped – specific types of cargo require special handling and storage facilities (e.g. livestock, dangerous or perishable goods). These facilities might not be available at all airports.

3.45 At some UK airports a significant share of air cargo is transported in the bellyhold of passenger aircraft. This requires infrastructure to support both passenger and cargo services. Where bellyhold cargo is an important aspect of an airport’s operations, it may be important to understand the impact of these operations on airline switching costs.

3.46 The ability and willingness of carriers supplying cargo services to switch between airports are affected by the costs of doing so, which can be influenced by a number of factors. The CAA expects to consider, among others, some or all the following factors in assessing air cargo service substitution:

- whether, and to what extent, cargo is transported in the bellyhold of a carrier’s passenger aircraft;
- the economic activity surrounding alternative airports that supports demand for cargo shipping;
- the existence of adequate storage facilities and transfer equipment at alternative airports;
- the availability of sufficient airport capacity at alternative airports;
- whether the runway specification is suitable for the carrier’s operations;
- the level and quality of surface access networks;

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<sup>41</sup> Integrators such as DHL, UPS, Fedex or TNT ‘integrate’ the full logistics chain within one company, including air transport of cargo on their own cargo-only aircraft. This enables integrators to offer both door-to-door services for end consumers as well as airport-to-airport services, and to process and transport both small individual parcels as well as larger consignments. In addition to using their own airline, integrators can also buy in capacity on other airlines transporting cargo.

- the strength of substitution to and from other types of transport; and
- the costs of setting up operations at alternative airports and of decreasing or reducing operations at the current airport.

3.47 The CAA considers that the relevance of the cargo market for a competition assessment will vary between airports and depend on the importance of the cargo business to the individual airport in question.

#### Retail

3.48 Retailers constitute another potential user group faced by the airport and the impact of retail activities on airport incentives is likely to be an important aspect of the CAA's analysis, reflecting the multi-sided nature of markets.

3.49 There is a range of retail activities at an airport. Some retail services, such as car hire and other surface access services, relate directly to the activity of travelling and flying to and from the airport. Other retail services offer the same or similar services to 'high street' retail services, such as post offices, food and beverage and general shopping. In general terms, retailers' willingness to pay for retail space at an airport is likely to be dependent on: the volume of passengers, as well as that of non-travelling visitors (for example 'meeters and greeters'); their income and other characteristics; and the time that these users might spend at the airport (i.e. the retail 'dwell time')<sup>42</sup>. Further, airline and airport employees may also be customers of certain airport retailers.

3.50 Passengers are likely to have different preferences for retail services according to their direction of travel (i.e. whether they are flying to or from the airport). For example, inbound passengers arriving at their destination airport may be interested in car hire services whereas outbound passengers might be more interested in car parking facilities and duty free shopping.

3.51 Unlike airlines and passengers, many retail providers are likely to take into account alternative retail sites that are not located at airports, including retail space in city centres or shopping malls (and other potential sales channels, such as the internet). Unless there is evidence that retail offerings have significant airport-specific characteristics (such as car parking and other forms of surface access), the CAA is unlikely to focus on the precise extent of a retail market in an airport competition assessment.

#### Market segmentation and temporal markets

3.52 In some cases, companies may be able to differentiate prices and/or service quality when offering the same product to users in different market segments. Market segmentation can be a normal feature of a competitive market. In some cases, circumstances may mean that such practice may constitute abusive behaviour. However, assessing airport conduct is beyond the scope of these guidelines.

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<sup>42</sup> Malavolti E (2009) *Single till or dual till at airports: a two-sided market analysis* Working paper ENAC, Toulouse School of Economics.

- 3.53 The CAA considers that market segmentation might narrow the relevant product market, and agrees with the EC's assessment of the relevance of price discrimination (i.e. price- or quality-based market segmentation):

*“the extent of the product market might be narrowed in the presence of distinct groups of customers. A distinct group of customers for the relevant product may constitute a narrower, distinct market when such a group could be subject to price discrimination. This will usually be the case when two conditions are met: (a) it is possible to identify clearly which group an individual customer belongs to at the moment of selling the relevant products to him, and (b) trade among customers or arbitrage by third parties should not be feasible.”<sup>43</sup>*

- 3.54 There may also be temporal markets, which could allow market segmentation across time periods. In the case of airports, it might be relevant to differentiate either between different seasons (airline passenger schedules are generally divided into a winter and a summer season, aligning with the period over which airport slots are allocated<sup>44</sup>) and/or between different times of the day, in particular between peak and off-peak times. These temporal differentiations may be relevant when passengers and/or airlines do not regard different time periods (seasons or times of day) as substitutes.
- 3.55 The CAA considers that airport market segmentation is likely to be limited to the airport-airline interface rather than at the airport-passenger interface, as an airport is less likely to be able to identify the characteristics of passengers.<sup>45</sup>

#### *Supply-side substitutability*

- 3.56 The CAA agrees with the OFT that “supply-side substitution can be thought of as a special case of entry – entry that occurs quickly, effectively, and without the need for substantial sunk investments.”<sup>46</sup> It therefore addresses the question of whether, to what extent and how quickly undertakings would begin to supply a market in response to a hypothetical monopolist increasing prices.
- 3.57 In airport markets, an example of supply-side substitution would be if an airport offering infrastructure services solely to the General Aviation sector chose to broaden its offering to include commercial airline passenger and/or cargo services. This could occur in response to a rise in airport charges at an incumbent airport in the passenger and/or cargo services market(s).

<sup>43</sup> European Commission, DG COMP *Commission notice on the definition of relevant market for the purposes of Community competition law (97/C 372/03)*, paragraph 43.

<sup>44</sup> Slots are allocated at UK airports that have been designated as ‘slot coordinated’ - essentially those where airport capacity is shown to be insufficient to meet actual or planned airline operations. The slot coordinator must fulfil a number of conditions, including being independent and functionally separated from any single interested party and acting in a neutral, non-discriminatory and transparent way. Airport Coordination Limited is coordinator at UK slot-coordinated airports.

<sup>45</sup> However, second-degree price discrimination may provide the airport with a means of segmenting the passenger market. For example, passengers might be offered different levels of service quality (e.g. fast track security lane) or receive discounts for frequent usage (e.g. car parking).

<sup>46</sup> OFT *Market Definition* guideline (OFT403), paragraph 3.15.

- 3.58 Evidence that could be considered in assessing the scope for supply-side substitution includes, but is not limited to:
- the availability of suitable, under-utilised infrastructure to serve the relevant market;
  - the additional costs incurred and the time required by an airport to begin serving the market;
  - the presence of any legal or contractual obligations that limit an airport's ability and/or willingness to switch production; and
  - airport user views as to the substitutability of the services provided by the potential entrant(s).

### **Geographic market definition**

- 3.59 As discussed above, airports serve a number of different users and this may lead to there being different relevant geographic markets for different groups of users. For example, geographic markets for services to passengers may vary by passenger type, and between long-haul and short-haul flights since the attributes of the flights may change passengers' perceptions of which airports are substitutable. The geographic market for cargo operations is also likely to differ from that for passenger airline operations.
- 3.60 The CAA considers that passenger switching is likely to be a significant focus of geographic market definition. However, it may also be important to consider the interdependencies with, or feedback effects from, the airport's other user groups.
- 3.61 Whilst geographic market definition might be focused on the potential for passengers to switch between airports, it will also be important to ensure that the ability of airlines to switch away from an airport – potentially to a relatively distant airport – is included within the wider assessment of competitive constraints. Annex A illustrates possible choice sets of passengers and airlines in response to an airport increasing its charges and the possible types of switching cost associated with these choices. Assessing the likelihood that airlines and passengers take these choices, and the impact this would have on the airport in question, is at the core not only of the market definition but also of the assessment of the strength of competitive constraints an airport is facing.

### *Passengers*

- 3.62 In the context of geographic market definition, evidence on passenger switching may include, but would not be limited to:
- the proximity of an airport to a passenger's point of origin or destination, and passengers' distance elasticities;
  - the difference in the costs of surface access between airports;
  - the quality and speed of the surface access transport; and
  - passengers' price elasticities.

- 3.63 There is a range of techniques for understanding the likely extent of an airport's geographic market(s). The CAA's views on these techniques are set out in the CAA's working paper on *Empirical methods relating to geographical market definition*. The CAA expects to consider these, along with other appropriate methods and evidence, in defining the relevant geographic market(s).

#### *Passenger airlines*

- 3.64 This subsection focuses on passenger airlines. Cargo airline operations are considered in the later subsection on cargo.
- 3.65 The nature of airline switching may affect the definition of the relevant geographic market. An airline's ability to switch between airports in different geographic locations will depend on factors similar to those outlined in the product market section (see paragraph 3.42).
- 3.66 An airline's willingness to switch between nearby airports may depend, to some extent, on passengers' ability to switch between these airports, and the number of passengers that might 'follow' an airline to the alternative airport. However, airline switching is also likely to depend on the characteristics of the alternative airports and their ability to deliver a similar yield, which may not depend upon whether passengers are able to 'follow' the airline.
- 3.67 The CAA considers that the European Common Aviation Area (ECAA), and the ability of the airlines of Member States to operate flights between and within any Member States, is likely to be an important aspect of assessing the scope of airline switching, particularly in the context of short-haul services. In particular, it may be important to consider whether the ability of airlines to relocate their operations within or between different Member States constitutes a relevant competitive constraint. In certain circumstances, it might even be relevant to consider the possibility of airlines switching to countries outside the ECAA, in particular where flexible legislation and Open Skies agreements accommodate the movement of airline operations.
- 3.68 Similarly, for long-haul operations, it is likely to be important to consider the impact of hub airports and whether airlines and passengers using hub airports view travel via different hub airports as reasonable alternatives. In general terms, airlines offering hub services may find it more difficult to relocate their capacity – or their growth plans – to other hub airports, due to the existence of airline networks.
- 3.69 Figure 2 in Annex A illustrates possible choice set of passenger airlines.

#### *Retail*

- 3.70 The CAA does not consider that geographic market definition for retail is likely to be a focus of the assessment of airport competition. However, the effects of any interdependencies between other airport user groups and retail will need to be taken into account.

*Cargo*

- 3.71 The relevant geographic market for cargo services is likely to differ from that of passenger services as final cargo consumers are likely to be further removed from the provision of cargo-related airport services, which is likely significantly to affect airlines' and consumers' price and distance elasticities.
- 3.72 It is likely that the relevant geographic market for a cargo operation will in part depend on the extent to which the products being shipped are 'time sensitive'. Where products are 'time sensitive', such as some forms of mail and perishable goods, this can reduce the distances over which cargo can be transported by road, reduce the number of airports that cargo shippers view as reasonable substitutes, and narrow the geographic market.

*Geographic market segmentation*

- 3.73 Airports are generally unable to observe passengers' surface origin or destination and modify their pricing accordingly. The CAA considers that geographic market segmentation is unlikely to be significant in airport markets.
- 3.74 It is unlikely that the geographic origin of airlines would be a relevant basis for market segmentation. Further, international rules on airport charges set out in the Chicago Convention 1944 prohibit discrimination between airlines on the basis of their nationality.<sup>47</sup>

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<sup>47</sup> Chicago Convention 1944 Article 15

## 4. Market structure and market shares

- 4.1 Evidence on the market structure and market shares is commonly used in competition assessments as it is generally readily available and provides useful information about the size of a business in relation to the relevant market, which is often an important indicator of the existence (or absence) and degree of market power.
- 4.2 The CAA takes the OFT's view that "in general, market power is more likely to exist if an undertaking (or group of undertakings) has a persistently high market share."<sup>48</sup> A high market share relative to its competitors would further increase the likelihood of an undertaking holding market power. Further, the changes in an undertaking's market shares can also provide information about the extent of market power, and may be more informative than the market share at any single point in time.
- 4.3 Market shares and market concentration measures may not be sufficient in isolation to determine the level of competition in a market, and it will be important to consider the competitive constraints that might arise from potential competitors as well as those currently present in the market. Indeed, the CAA expects to follow the European Commission's approach which is to "interpret market shares in the light of market conditions, and in particular of the dynamics of the market and of the extent to which the products are differentiated."<sup>49</sup>
- 4.4 The features of the market which could be considered alongside market shares include, but are not limited to:
- the price responsiveness of competitors;
  - price elasticities and responsiveness of the different user groups, including airlines, passengers and retail (discussed in chapter 3);
  - airline buyer power (discussed in chapter 6);
  - barriers to entry and expansion (discussed in chapter 5); and
  - the degree of technological change and innovation in the market (both technological innovation as well as service and business innovation).
- 4.5 The CAA considers that there are aspects of airport markets that might reduce the reliability of market shares as an indicator of airport market power. First, market shares are less reliable where there is a high degree of product differentiation. When products are differentiated, factors such as brand loyalty, location, and service quality determine a user's choice set, along with price. In this case, market shares may not be an accurate representation of different firms' market power. In the airports market, airports are generally differentiated in the facilities and services they offer to airlines, and differentiated geographically in terms of their location relative to passengers. Accordingly, it may be important to take account of the characteristics of an

<sup>48</sup> OFT, *Assessment of market power* guideline (OFT415), paragraph 4.2.

<sup>49</sup> European Commission, *DG COMP Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings* (2009), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:045:0007:0020:EN:PDF>.

airport's user base and the physical characteristics of an airport when measuring market shares.

- 4.6 Second, the multi-sided nature of airports affects the interpretation of evidence on market shares, not least because the airport might have different market shares in respect of each 'side' of the market. This may require the CAA to consider market shares for each side of the market, as this might provide useful information for the competition assessment.
- 4.7 Overall, the CAA would expect to undertake analysis of airport market shares. However, as set out in the previous chapter (paragraph 3.5), competitive constraints are relevant whether they arise within or outside the defined market, and in some circumstances it may be difficult to define the market clearly enough to distinguish between constraints "within" and "outside" the relevant market. This may limit the reliance that can be placed on any given measure of market shares as an indicator of airport market power. In addition, due to the nature of airport markets, it may be important to modify this analysis to reflect the differentiated and multi-sided nature of airports.

### **Ownership of multiple airports**

- 4.8 When assessing market shares and market structures, the CAA will take full account of the effects of cross- or joint ownership of two or more airports on the competitive constraints facing an airport. Common ownership of airports that could competitively constrain each other would need to be taken into account, as it could reduce the scope for competition between them. However, this would not preclude the possibility that an airport under common ownership within an airport group may hold SMP, while other airports under the common ownership may not. In assessing whether airports should be regarded as jointly owned, the CAA expects to adopt the common framework established by the OFT, EC and relevant case law.<sup>50</sup>
- 4.9 Cross-shareholdings, which might not result in certain airports being found to be under common ownership, may also have an effect on airport incentives. In assessing the extent of an airport's market power, the CAA will take account of any potential incentive effects, and the impact on competitive constraints of cross-shareholdings between airports.

<sup>50</sup> The EC and UK domestic merger guidelines provide a definition of what constitutes joint ownership. Section 26 of the Enterprise Act 2002, and the joint CC/OFT Merger Assessment Guidelines (OFT 1254) consider a concentration to have taken place when one party has one of, in descending order, 'de jure/legal' (50% or more voting rights) or 'de facto' (less than 50%) control, or a 'material influence' (much less than 50%) over another. For example, in *BSkyB plc/ITV plc*, BSKyB was found to have a material controlling influence in ITV by holding 17.9% of shares. The EC's concept of 'decisive' influence is a higher threshold than the CC/OFT's 'material influence' (EC Merger Regulation 139/2004).

## 5. Barriers to entry and expansion

- 5.1 The existence of barriers to entry and expansion can affect both market definition and market power by limiting the choice sets available to users by preventing expansion by market incumbents and potential entry. It can also be important to understand the nature of these barriers when interpreting evidence of market shares. It is therefore important to take account of barriers to entry and expansion in a competition assessment.
- 5.2 Barriers to entry are factors that may allow an undertaking profitably to sustain prices above the competitive level in the long term, without facing a threat of entry by a potentially more efficient competitor. The CAA agrees with the OFT that “the lower are entry barriers, the more likely it is that potential competition will prevent undertakings already within a market from profitably sustaining prices above competitive levels.”<sup>51</sup> Barriers to entry are likely to be a significant factor in airport markets. For example, the availability of ‘greenfield’ (or ‘brownfield’) sites and planning permission processes can delay and/or prevent the construction of new entrant airports. Entry into the airports market generally also typically entails a large amount of sunk costs, which may deter potential entrants.
- 5.3 The multi-sidedness of the airports markets may create additional barriers to entry as either side of the market might be hesitant to make use of a new airport before a critical mass of users from another side of the market are present.<sup>52</sup>
- 5.4 Barriers to expansion are factors that prevent existing incumbents from expanding their output and may allow an undertaking profitably to sustain prices above the competitive level. The CAA considers 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 market<sup>53</sup>, 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.
- 5.5 In analysing the potential impact of new entry and expansion, the CAA expects to consider, but not limit itself to, the following factors:
- government policy, planning or other regulations, which could limit the availability of suitable land for airport operations and/or directly limit the ability of airports to provide additional capacity;
  - the availability of suitable land;
  - the potential for airspace constraints in congested areas;

<sup>51</sup> OFT *Assessment of market power* guideline (OFT415), paragraph 5.2.

<sup>52</sup> In the literature, this is referred to as the “chicken-and-egg” problem, which can arise when users on one side are reluctant to switch to the platform unless they expect that some users from the other side(s) will also switch, and vice-versa. See also Caillaud and Jullien (2002) *Chicken and egg: competition among intermediation service providers*.

<sup>53</sup> For example, Robin Hood Doncaster Sheffield airport opened in April 2005, and London City Airport opened in 1988.

- the magnitude of sunk costs, which are likely to be significant due to the capital-intensive nature of airports and the specificity of much of the infrastructure;
  - the magnitude of economies of scale and/or density, which may require a potential entrant to enter the market on a large scale in order to compete effectively; and
  - the impact of airline network effects, which could require a new entrant airport to achieve a large minimum viable scale in order to operate economically in the market segment;
- 5.6 As entry and expansion are also likely to be affected by the prevailing price levels in the market, any evidence about differences between the prevailing and the competitive price level would therefore also need to be considered for the assessment of the potential for or barriers to entry and expansion.

### **Scarce capacity and capacity constraints**

- 5.7 Scarce capacity can be a normal feature of a market and may not necessarily lead to market power and monopoly pricing. However, the underlying causes of scarce capacity might constitute significant barriers to entry and expansion.
- 5.8 In the airports market, scarce capacity is likely to manifest itself in the form of limited runway slots and/or terminal capacity. Although barriers to entry and expansion are one way in which scarcity can be created, scarcity could also be a normal and/or transitory feature of a generally competitive market. In the context of a competition assessment, it is important to distinguish carefully between different causes of scarcity.
- 5.9 Where capacity constraints are caused by barriers to entry and/or expansion, they are likely to affect the strength of competitive constraints faced by an airport, and may give rise to market power held by incumbent airports, particularly where the barriers are non-transitory in nature. However, even where such barriers result in capacity constraints, there may still be considerable rivalry between incumbent airports and sufficient choice for users. Barriers to entry might also affect different airports to different degrees, causing scarcity at one airport relative to its competitors, which might affect the balance of market power held by the different competing airports.
- 5.10 Non-transitory capacity constraints may also take the form of artificial scarcity, where it results from firms deliberately restricting capacity expansion in order to put upward pressure on the price level, and raise prices above the competitive level. Such airport behaviour would be considered an abuse of market power and is prohibited by the Treaty for the Functioning of the European Union (TFEU) and the UK Competition Act 1998.
- 5.11 In considering the existence and consequences of non-transitory scarcity, the CAA would consider evidence including, but not limited to, some or all of the following factors:
- the extent of the capacity scarcity;

- the duration of the capacity scarcity;
- evidence and effects of relative capacity scarcity;
- evidence of previous under-investment;
- evidence of commercially viable projects not being pursued;
- the potential for countervailing effects from airlines increasing aircraft capacity; and
- the impact of Government policy.

5.12 In general terms, the underlying causes of capacity constraints in the airports market could potentially have different consequences for different airports. An assessment of market power would therefore need to take account of the particularities of the effects of scarcity on a case-by-case basis.

## 6. Airline buyer power

- 6.1 Buyer power exists where buyers have a strong negotiating position with their suppliers, which weakens the latter's potential market power. The CAA considers that assessing the existence and degree of airline buyer power may be an important aspect of an airport competition assessment and agrees with the OFT's view that "the strength of buyers and structure of the buyers' side of the market may constrain the market power of a seller. Size is not sufficient for buyer power. Buyer power requires the buyer to have choice."<sup>54</sup>
- 6.2 The OFT states that buyer power is "most commonly found in industries where buyers and suppliers negotiate, in which case buyer power can be thought of as the degree of bargaining strength in negotiations".<sup>55</sup> The OFT also refers to four factors that might contribute to buyer power:
- *"the buyer is well informed about alternative sources of supply and could readily, and at little cost to itself, switch substantial purchases from one supplier to another while continuing to meet its needs;*
  - *the buyer could commence production of the item itself or 'sponsor' new entry by another supplier (e.g. through a long-term contract) relatively quickly and without incurring substantial sunk costs;*
  - *the buyer is an important outlet for the seller (i.e. the seller would be willing to cede better terms to the buyer in order to retain the opportunity to sell to that buyer); [and]*
  - *the buyer can intensify competition among suppliers through establishing a procurement auction or purchasing through a competitive tender".<sup>56</sup>*
- 6.3 The involvement of intermediaries, in particular tour operators, but also travel agents and corporate travel offices, can also affect an airline's buyer power towards the airport, as it presents another level at which passenger demand could be bundled and used to exert buyer power on either airlines and/or airports. Further, airline co-operation such as through alliance agreements, code-sharing and interlining can also affect the degree of airline buyer power vis-à-vis airports, through the bundling of demand from a number of otherwise competing and potentially less coordinated airline users. The relevance and magnitude of these effects will be an empirical question.
- 6.4 The evidence that the CAA may consider in assessing the degree of buyer power could include, but might not be limited to:
- the alternatives available to airlines operating at the airport;
  - the net switching costs of the airlines operating at the airport;
  - whether other airlines would be likely to take up airport capacity freed up by an airline that switched some or all of its operations away from the airport;

<sup>54</sup> OFT Assessment of market power guideline (OFT415), paragraph 6.1.

<sup>55</sup> OFT Assessment of market power guideline (OFT415), paragraph 6.2.

<sup>56</sup> *ibid*

- indicators for the importance of a given airline to the airport in question; and
- information on the level of previous airline switching and possible future switching.

6.5 The multi-sidedness of the airport market may also be an important consideration regarding airline buyer power. The interdependences between the different sides of the market may affect the bargaining position(s) of the airline(s) relative to the airport.

## 7. Other factors

- 7.1 This chapter sets out a number of factors that may be relevant to the assessment of the competitive constraints faced by an airport. These factors may affect the market definition analysis and/or the analysis of competitive constraints.

### Long-term contracts

- 7.2 The prices and terms stipulated in long-term contracts between an airline and an airport can affect airport market power. These set out various obligations on the airline and airport and could constrain both the airport's ability to raise prices where these are covered by such a contract. Further, long-term contracts can also change an airport's incentives with regard to setting non-contracted prices. Overall, long-term contracts could constrain the airport's ability to exert any market power and/or the airline's countervailing buyer power by limiting airlines' ability to threaten to switch to another airport. The existence of a long-term contract between an airport and a particular airline can also provide evidence of the airline's importance to the airport.
- 7.3 The CAA considers that the terms of long-term contracts may also provide useful information regarding an airport's long-term pricing. Long-term, contracted prices could be assessed against the long-term costs facing the airport to inform the assessment of market power. Long-term contracts may also provide evidence of the relative market position of the airport and airline at the time that the contract was signed.

### Evidence on the behaviour and performance of airports

- 7.4 The CAA considers, in line with the OFT, that an airport's conduct in a market and its effects can be a useful indicator of market power. This could include, but not be limited to, evidence concerning the:
- service quality and the relationships with its users;
  - financial and pricing performance; and
  - the airport's investment record.
- 7.5 The CAA will place such evidence in the context of the airport market, taking into account the factors including, but not limited to:
- the effects of the airport's conduct;
  - the capital-intensity of the airport market;
  - the potential for profits to vary above and below long-term average levels for sustained periods;
  - the impact of economic regulation on any of the above dimensions; and
  - the potential difficulties associated with comparing performance between airports (for example, in some cases higher profits could be an indicator of higher efficiency rather than market power).
- 7.6 As discussed in chapter 3, the interdependence of demand between user groups can mean that prices to one side of the market may not always reflect

the costs attributed to that side of the market. In such situations the CAA would also consider other sources of evidence, including data on the profitability of airports as a whole, to analyse whether the airports' returns are consistent with operating in a competitive market.

- 7.7 In assessing the behaviour and performance of airports, the CAA expects to make use of, but not necessarily limit itself to, some or all methods outlined in the CAA working paper *Empirical methods for assessing behaviour, performance and profitability of airports*.<sup>57</sup>

### **The impact of regulation**

- 7.8 The economic regulation of one or more firms in the market can affect competition and competitive outcomes. Therefore, in line with the OFT, the CAA will account for the direct and indirect effects of regulation on airport incentives and conduct when undertaking a competition assessment.
- 7.9 *Ex ante* economic regulation can directly affect market conditions by limiting the ability of regulated firms to exert market power, for example by directly controlling prices and/or service quality levels. However, the existence of economic regulation does not necessarily prevent regulated firms from exerting market power in other ways, nor does it remove obligations on regulated firms to comply with general competition law. Furthermore, unregulated airports may be indirectly affected by the presence of economic regulation at a competing airport.
- 7.10 The CAA will also consider the effect of other forms of regulation that are present in the airports market. Regulations can have different effects, ranging from protecting consumer interests and encouraging competition to constituting barriers to entry, as referred to in paragraph 5.5. The CAA is likely to consider the impact of the following regulations:
- safety regulations enforced by the CAA;
  - EC slot regulations;
  - Airport Charges Directive (ACD);
  - international guidelines (e.g. ICAO guidelines) and agreements (article 15 of the Chicago Convention 1944) and bilateral agreements, which may affect the ability of airlines to switch between airports and/or the ability of airports to discriminate between airlines;
  - Traffic Distribution Rules (TDRs) applying to London Heathrow and Gatwick airports, particularly the limitations that these place on the ability of cargo-only and General Aviation aircraft to operate at Heathrow;
  - the Airports (Ground Handling) Regulations, including the protections that these regulations provide on foreclosure of groundhandling markets;
  - Route Development Funds (RDF);

<sup>57</sup> Available at [http://www.caa.co.uk/docs/78/ERG\\_Working\\_paper\\_Performance\\_and\\_Behaviour-26-11-10\\_FINAL.pdf](http://www.caa.co.uk/docs/78/ERG_Working_paper_Performance_and_Behaviour-26-11-10_FINAL.pdf)

- Public Service Obligations (PSO), which provide public subsidies for routes that would otherwise not be commercially viable for airlines, typically for routes to remote and scarcely populated areas of the UK; and
- other airport-specific regulations affecting the behaviour and service provision of airports, including the regulations on Passengers with Reduced Mobility (PRM).

### **Substitution to and from other types of transport**

7.11 Some air services offered at airports may be subject to competitive pressure from surface transport substitutes such as road and rail. For example, high-speed rail links could offer competition for certain short-haul flights. The availability of these substitutes can place significant constraints on an airport's market power for both passenger and cargo services by expanding the choice sets of the relevant user groups.

### **Other activities at airports**

7.12 Some airports generate significant income from user groups that are not directly related to commercial passenger and cargo operations. In particular, different forms of General Aviation can be significant user groups of individual airports, especially of smaller airports. General Aviation subsumes a wide variety of civil aviation user groups that are not included in the preceding discussions of commercial passenger or cargo airlines. This can include, but is not limited to:

- flight schools;
- private fliers;
- commercial private jets and air taxis<sup>58</sup>;
- police and rescue helicopters; and
- other specific niche activities such as helicopter services to oil platforms in the North Sea.

7.13 An airport's business might also be affected by the presence of an aircraft production facility or a large aircraft maintenance and production facility that would be likely to require a specific set of services.

7.14 Such user groups would face distinct switching costs and choice sets that may be specific to these activities. However, many of these activities, in particular those of General Aviation, can be important to certain airports. Where such specific user groups exist, the CAA considers that their significance needs to be assessed and taken into account on a case-by-case basis.

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<sup>58</sup> Commercial private jets and air taxis could also fall within the definition of commercial passenger and cargo operations. However, they are classified as General Aviation for the purposes of legislation such as Traffic Distribution Rules, under certain thresholds. While undertaking a competition assessment, the CAA will assess the importance of the competitive constraints imposed by commercial private jets and air taxis on a case-by-case basis.

## **Annex A. Illustration of passenger and passenger airline choice sets**

- A.1 Figures 1 and 2 illustrate potential alternative choices that different types of passengers and passenger airlines could face if the airport they originally used (or intended to use) increased its prices or lowered its service standards. These have been developed by the CAA with support from industry representatives for illustration of one of the core parts of competition assessments, namely the assessment of the scope and cost of switching airports in response to an airport raising its prices or lowering its service quality standards. They are therefore not exhaustive lists of switching possibilities and might not apply to each individual situation that might be encountered.
- A.2 The ability and likelihood of passengers and airlines choosing to react to an airport's price rise or lower service standard depends largely on the costs and degree of inconvenience that the alternative would cause – which are generally referred to as “switching costs”.
- A.3 The larger the scope and likelihood of switching is for passengers and for airlines, the larger will be the competitive threat on airports that raising prices or lowering service standards will be unprofitable. The analysis of passenger and airline switching, and of switching costs, is likely to be an important part of any competition assessment, both in the context of defining the relevant markets and in the context of assessing the degree of competitive constraints on airports.

Figure 1 Summary of choice sets – passengers

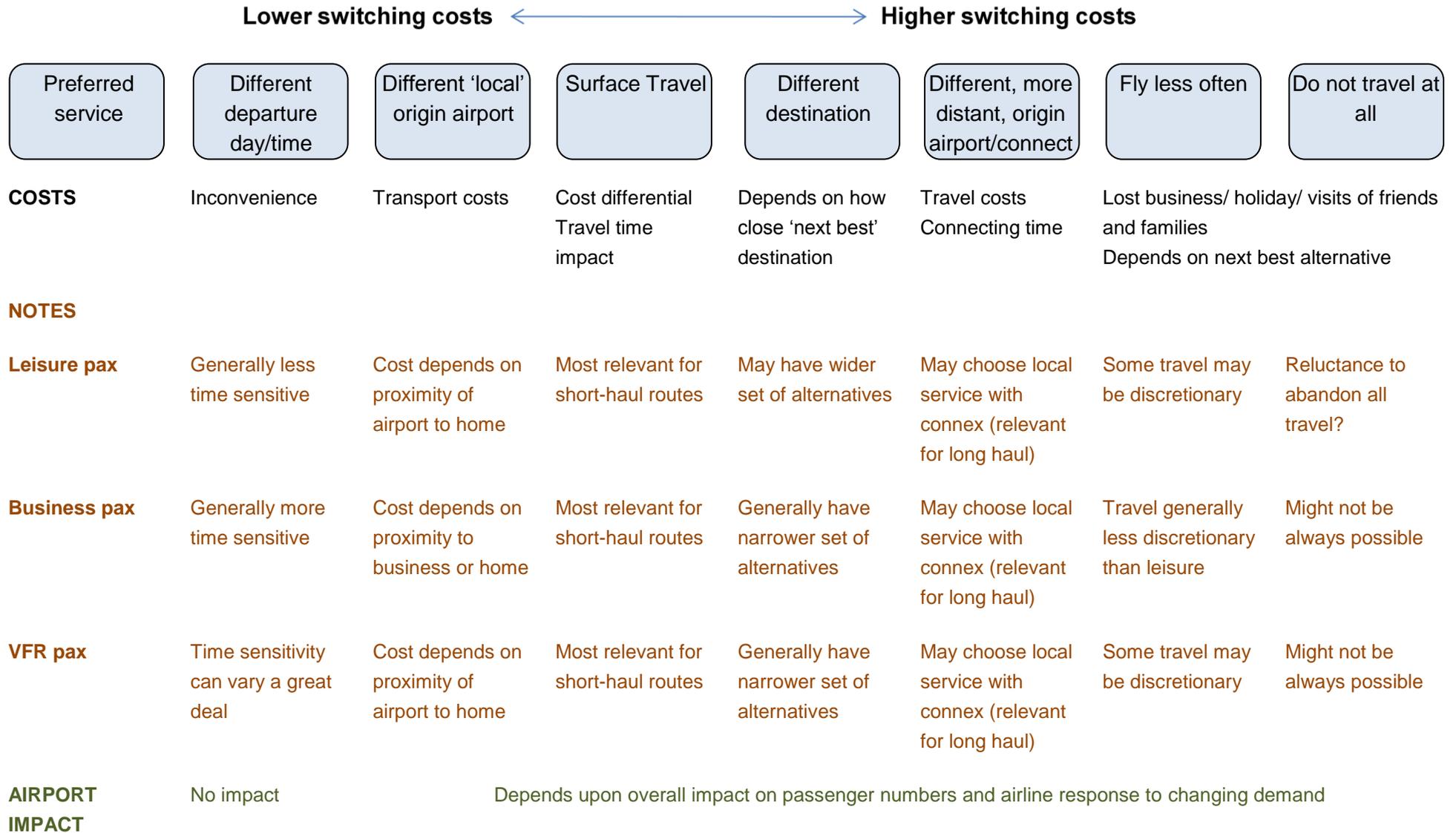


Figure 2 Summary of choice sets – passenger airline

