Review of the CAA's

Stansted Market Power Assessment

By

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Executive summary

The general context

The CAA's recent Stansted Market Power Assessment (SMPA) marks a shift in position of the regulator in regard to the future of price regulation at the airport, yet this shift is not linked in any substantive way to new evidence. Moreover we find that the new reasoning associated with the change of view is characterised by (a) the introduction of some serious economic errors and (b) the systematic neglect of relevant factors and evidence. Our own view is that the most recent market developments and evidence indicate further strengthening of competitive pressures on airports, driven by downstream competition among airlines and responses to that competition by airport operators across Europe and elsewhere in the world, as well as by BAA's divestiture of Stansted which was intended to promote inter-airport competition.

The shifts in the CAA's analysis matter because they are associated with a shift in its policy position toward more intrusive regulation based on price controls, or the threat of future price controls, which is to be applied in what is manifestly a non-monopolistic setting.

Quite obviously on the facts, Stansted is not a 'natural' monopoly like the pipes and wires that carry basic utility products such as water, gas and electricity, and which are typically subject to price controls because of the very substantial market power that the relevant utilities inevitably possess. About the most that is claimed by the CAA is that Stansted might be able to raise prices by 5% to 10% above an undefined competitive level, for an undefined length of time, and, if that is the case, Stansted would have some market power. The conclusion about market power is, at best, speculative, and the degree of market power claimed is at a level enjoyed by many companies in other UK sectors and in other countries which are not subject to price controls.

Market definition

Errors of reasoning and neglect of relevant evidence occur throughout the market definition section of the SMPA. Examples include the following:

- The product market is defined in terms of characteristics that apply to airlines ('short haul routes', 'low cost carriers', etc.), not, as it should be, in terms of the services supplied by Stansted.

- The terms 'short haul' and 'low cost carrier' are themselves not defined.

- The nearest the SMPA comes to a correct approach is to suggest that airline requirements differ, and that Stansted provides different services to meet these requirements. However, the existence of such 'product/service differentiation' is nowhere near sufficient to warrant conclusions that the differentiated products/services lie in distinct markets: most market definitions in competition policy cases encompass differentiated products. What matters is the degree of differentiation/substitutability between different services, and this issue is not addressed in the SMPA.

- The SMPA fails to apply standard 'chain of substitutability' analysis to market definition issues. Notwithstanding its relevance for the issues to be settled, there is only one passing reference to such analysis (at paragraph 4.156), but no reasoning.

- The conceptual framework adopted is claimed to be that of the SSNIP test, which requires consideration of the effects of an increase in aeronautical charges to about 5% to 10% above the competitive level. However, the competitive price is not itself estimated, and in the absence of such an estimate, comments and conclusions are necessarily speculative and unsubstantiated.

- There is an attempt in the SMPA to examine benchmarks that might provide indicators of the approximate level of the competitive level of charges at Stansted, but the exercise is flawed in at least two major respects: (a) it implicitly relies on a geographic market definition that is inconsistent with, and widely divergent from, the geographic market actually defined; and (b) it ignores one of the most important influences on the competitive level of aeronautical charges, the level of net revenues from non-aeronautical activities.

- The methodology used to estimate the geographic market implies that competition can only exist between suppliers operating with excess capacity. This cannot be right: in markets generally, competition among suppliers is observed to occur both when the capacity position is tight and when there is excess capacity. Thus, no rational competition agency would exclude a steel plant from a market on the grounds that it was operating at full capacity.

- The SMPA ignores the important differences in factors that influence the choice of airport by inbound (non-UK resident) and outbound (UK resident) Stansted passengers. It also almost totally ignores the factors driving choice of airport by business passengers, in spite of this group accounting for around 17% of Stansted's passengers, and fails to consider the implications of evidence showing that UK-resident and non-UK-resident business travellers have distinct characteristics that are potentially highly relevant in determining their choice of airport.

- There is a consistent failure to distinguish between (a) average or typical passengers who use a particular airport and (b) 'marginal' customers who are much more likely to switch to another airport in the event that there is change in the relative competitive position of airports. It does not require a large percentage of passengers to be marginal for the threat of their departure to exercise a significant constraining effect on charges.

- The notion of 'strategic constraints', which is not defined with any precision yet appears to be relied upon heavily in reaching a novel geographic market definition, is a term invented by the CAA in this particular exercise, not a term of art in general economics or in the more specialised economics that has been developed for the purposes of competition law enforcement.

- The suggestion in the SMPA that the cargo market should be defined very narrowly, on the basis of dedicated air cargo movements to and from Stansted alone, ignores substitutability with bellyhold carriage, and ignores both substitutability and complementarity of dedicated air cargo movements with road and rail movements. The market definition stands in stark contradiction with EU law precedents, and no evidence is presented to justify the idiosyncratic position taken.

Platform markets

The CAA has misinterpreted the use of the term 'network effects' as it is used as a term of art in the economic analysis of platform markets. As a result of this error, it has mistakenly dismissed a number of points that are highly relevant for the analysis of airport pricing, and which are manifestly obvious on the facts. This leads on to further errors of reasoning and fact in its assessment of likely airline and passenger reactions to an increase in airport charges. We explain these technical, but highly significant, errors in some detail.

Competitive constraints

The CAA's analysis of competitive constraints is flawed by three errors that run throughout the analysis:

- A failure to recognise that it is potential switching 'at the margin' by airport users that is the major source of competitive constraints on airport charging. That is, it is the behaviour of marginal passengers, not of average or 'typical' passengers, that matters; and, in relation to airlines, it is marginal adjustments in the services (routes, frequencies) that an airline offers at a particular airport which are relevant for the analysis, not whether the airline is likely to make 'strategic' decisions to withdraw from the airport entirely.

- In considering the effect of an increase in airport charges on passenger numbers, the CAA does not take adequate account of the leveraging effect of changes in airline route structures and frequencies that are consequential on the charge increases. Thus, if a charge increase leads to the loss of a route from an airport, the impact on passenger numbers may be substantial since passengers who want to fly to the relevant destination will have to find another airport, or, alternatively, find an indirect route.

- As already indicated, there is no substantive analysis of the impact of higher aeronautical charges on (non-UK-resident) inbound passengers' choices of airport or on business passengers' choices generally. This is manifested in a failure to assess, in any very substantive way, the competitive constraints emanating from London City Airport.

Regulation versus competition: Test C

The principal reason that the vast majority of firms with significant market power are not subject to price controls (aimed at preventing the exploitation of market power) is that the effects on consumer welfare of price controls are generally significantly worse than those caused by higher prices. An exception to this can occur for those firms with very substantial market power in consequence of being natural monopolies; but Stansted is not a natural monopoly.

Price control tends to reduce the quality of the products/services supplied and to reduce incentives for investment and innovation. The second of these effects (i.e. reduced incentives for investment and innovation) is particularly harmful to airport users in the longer term, since economic progress is chiefly driven by innovation, which usually requires investment, and possibly substantial investment in some cases. However, notwithstanding its centrality for policy decisions, the CAA does not address the investment/innovation issues. The application of Test C is, therefore, necessarily one sided and incomplete.

The CAA's Stansted Market Power Assessment

Introduction

The CAA's Stansted Market Power Assessment (SMPA) marks a shift in position of the regulator in regard to the future of price regulation at Stansted. It is obviously right that a regulator change his/her mind when that is indicated to be appropriate by new evidence that tends to undermine a previously held position. In this case, however, we can see no such new evidence. If anything, the evidence indicates further strengthening of competitive pressures on airports, driven by downstream competition among airlines and responses to that competition by airport operators across Europe, and elsewhere in the world, as well as by BAA's divestiture of Stansted, which was intended to promote inter-airport competition.

In the absence of new evidence, the SMPA seeks to work its way to a new policy position by re-interpreting some of the evidence gathered and analysed by the CAA in the past, and by rejecting certain aspects of earlier analysis. The re-interpretation process is by no means comprehensive, however, and this gives a curate's egg aspect to the document. There are passages where the arguments and evidence seem to be clearly pointing away from the conclusions reached, before a new section is reached and the arguments run off in another direction entirely, leaving the evidence behind.

The issues raised by a change of mind would not necessarily be major ones, if the adjustments were modest in nature. However, the SMPA contains a number of radical shifts of position which cannot be linked to new evidence.

Even radical shifts of position on economic issues can be justified, without new evidence, if it is shown that previous analysis was wrong. In this case, however, as we will show at several points below, it is the new analysis that is wrong. Not only that, the new reasoning is inconsistent with published guidelines on competition assessment, is at variance with the decisions and practice of competition policy agencies and of the CAA in the past, including most notably the decisions and practice that led to BAA's divestiture of Stansted airport, and at some points is manifestly self-contradictory.

A few examples are worth citing at the outset, but will be explained in more detail below:

- The product/service market is not defined in terms of actual services provided but in terms of the characteristics of a sub-set of Stansted's customers, airlines (e.g. airlines that operate according to a 'low-cost carrier' business model – something which itself is not precisely defined – on 'short-haul' routes, a term that is likewise not defined at all precisely). Thus, the market has not been defined according to

conventional criteria. No rationale for deviating from generally accepted practice has been put forward, and it looks like a simple, technical economics mistake has been made.

- The geographic market is first defined extremely narrowly, covering an area that does not include the whole of the London area, which is contrary to market definitions used before, including by the Competition Commission. Yet when it comes to assessing a competitive level of charges, the reasoning depends on the existence of a geographic airports market that is almost global in scope (a market definition that is also inconsistent with previous practice). The result is reliance on two novel, extreme and mutually inconsistent market definitions.

- The CAA's cumulative, previous research had got it to a point where it had come to recognise the significance of changing airline route structures for demand for airport services, and for competition among airports; particularly, but not exclusively, the significance of the changing route structures of LCCs. The SMPA appears to discount that work without any careful assessment of its veracity, for example via detailed analysis of the profitabilities (to airlines) of differing routes, and of how those profitabilities change over time, including as a result of changes in airport charges.

- Two novel aspects of the analysis are the emphasis, as sources of market power, on the 'inherent attractiveness of the London market' and the 'strategic importance' of the London market to airlines. To the best of our knowledge, neither factor has appeared as significant in previous analyses of airport market power. Proximity to a large commercial city like London usually leads to an inference that demand will be higher for airport services, but that is a *demand* factor that says nothing about *competition* on the supply side (in fact, for most economic products and services, a greater level of demand tends to increase competition because it can sustain more competitors).

- The notion of 'strategic importance' is nowhere defined in the SMPA, and has no obvious, single economic meaning. It could, for example, mean that Stansted routes are particularly profitable for airlines, or that one or more airlines has significant monopsony power at Stansted (which might or might not mean that its routes are particularly profitable, depending upon market conditions). More fundamentally, if London is so strategically important, it is entirely unclear why a London market has not been defined.

- For the purposes of the analysis, the CAA appears to treat inbound passengers as though they were the same as UK resident passengers. Yet influences on the choice of destination airport for these inbound passengers, who comprise over 40% of Stansted's total passenger numbers, differ in a number of respects from the factors

that most affect UK resident passenger demand for the airport. CAA research has also shown (for inbound passengers) important differences from UK residents in journey times in the UK. In effect, therefore, the CAA ignores its own research on these differences and their consequences.

The shifts in the CAA's analysis matter because they are associated with a shift in its policy position toward more intrusive regulation which rests on price controls, or the threat of future price controls, applied in a non-monopolistic setting. Among other things, such regulation will itself tend to distort the development of competition among airports, and, perhaps most crucially for the interests of current and future air transport passengers, can be expected to weaken the incentives for innovative developments in services. Few things are as potent a deterrent to innovative effort as the prospect that, having made the investments and taken the risks in discovering and implementing new and more efficient products and services, price controls may then preclude financial returns that are commensurate with the investments made and risks taken.

Market definition issues

The SMPA correctly recognises the necessity of defining a relevant market in terms of both the products or services offered and the geographic scope of those services. However, the SMPA makes manifest errors of analysis on both counts.

The product/service market

Consider first the product/service market issues. Here the SMPA claims that Stansted operates in what it calls the Stansted short-haul market, comprising core aeronautical services for LCCs and charter airlines. The very label – Stansted short-haul market – signals the problems. If we were looking at the equivalent services in some other parts of the transport sector, we would not normally define bus terminals, or rail stations, or ports in terms of the length of the journeys made by the buses, trains or ships that use them; and there is, in any case, no very obvious economic boundary between what is classified as short-distance and long-distance travel. Rather, there is a continuum of routes of different distances and different traffic densities. In contrast, there are real and important economic differences between scheduled and charter services, which are grouped together in the CAA's proposed definition of the passenger market.[1]

[1] It can be noted, however, that, as for a number of other features of air transport, the traditional distinction between scheduled and non-scheduled services, which is analogous to the distinction between liner and tramp services in shipping (which European Competition Authorities have defined as distinct markets), has been significantly weakened by the development of LCCs. The point is not that the CAA is wrong to include LCCs and charter services in the same market, but rather that it has not taken a consistent approach when examining the substitutability between LCCs and charter services, and when examining the substitutability between LCCs

Similarly, if there is interest in air travel between, say, the London area and major economic cities served by non-LCC airlines, such as Amsterdam, Madrid and Munich, it is also rather unusual to define a separate market for the two types of carrier. It is true that an important consideration for, say, BA or one of its partner airlines operating a route from London to Madrid may be the additional returns to be obtained from inter-lining passengers, but such passengers generally only account for a modest proportion of the people using the service. Given that the route exists, many passengers on BA planes travelling to and from Madrid will typically be doing so to travel between the two cities, with no onward connections. Since these passengers could travel by BA or, alternatively, by an LCC, it seems odd to suggest that when they buy a BA ticket they are transacting in a different market from when they buy a Ryanair ticket.

The SMPA appears to recognise that something more is required (other than simply the business model of the airline and the length of the route) to segment the market to a degree required for there to be separate, identifiable markets. The existence of a continuum of route lengths has been noted, but business models themselves are less segmented than they used to be. Some charter airlines now offer seat-only tickets, copying LCC practices, BA is trialling discounts for hand-baggage only passengers out of Gatwick, and Flybe offers three 'classes' of short-haul services depending upon passengers' choices from a menu of options.

Although the analysis is relatively thin, the underlying 'separating factor' relied upon by the CAA to draw a line between LCC and charter airlines on the one hand, and all other airlines on the other hand, appears to be the existence of differences in the characteristics of the airport services supplied to LCCs and charter airlines. As in relation to the distinctions between LCCs and other airlines, and between short-haul and other routes, no precise specification of these differences is offered, no systematic evidence is examined to quantify their magnitudes, and no assessment is attempted of the significance of any differences identified for the demand and supply side substitutabilities that lie at the heart of the market definition exercise.

The fact of product or service differentiation is very far from sufficient to establish the existence of different markets, and it is a major error to suggest otherwise; and by not analysing the economic significance of service differences, that error is implicitly made in the SMPA. Were it otherwise, since most markets are characterised by product/service differentiation to some degree or other, many, many more markets would have been identified in the course of competition law enforcement than actually have been.

What matters is the degree of *economic* differentiation of the products/services, which is measured in terms of the extent of demand-side and supply-side substitutability, and which

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and other airlines. Distinctions that might have bearing on the assessment are emphasised in one case but discounted in the other.

requires quantitative assessment. Nowhere in the SMPA is there an attempt to quantify the economic significance of any service differences among different types of airlines: indeed at a more fundamental level, the physical differences – which are the jumping off point for economic assessment – are undefined. As already noted, no definition of an LCC (or a charter airline) is provided, and nor is there any listing of those airlines considered to be LCCs.

To illustrate the relevant point with a very simple example from another market, a white shirt with a 17" collar is a different product from a white shirt with a 15" collar; may be more expensive to produce (likely requiring more material) and possibly, but not necessarily sold at a different price; and different again from a blue shirt with a 15" collar. Yet it would be strange to see a market definition based on supply of shirts to people with fat necks, or with a colour preference of white over blue.

The characteristics of customers are only relevant in so far as they affect the ease with which one product/service can be substituted for another when, for example, the relative prices change. Moreover, the relevant substitution is to be measured *at the margin*, meaning that it is not necessary that everyone has a high propensity to switch for two products to fall within the same market. I may have a strong preference for Pepsi Cola over Classic Coca Cola, because it is a little sweeter. But if, say, 20% of consumers are not much bothered by this factor, they may be swayed by even small price differences. The manufacturers of the two products will, therefore, regard each other as potential competitors, because they are rivals for these less brand-loyal (marginal) customers.

It is, of course, always possible to attach labels to different types of customer. In the shirt size case, we could talk of fat necks and thin necks, just as medics do in relation to obesity when defining the term on the basis of some threshold level of the body mass index. But customer requirements are generally more continuous than these simplifying categorisations imply. There is a distribution of neck sizes, and a continuous distribution of body mass indices.

Although some individual airlines may seek to have relatively standardised fleets as one means of reducing costs, the potential users of an airport collectively present to the airport operators a spectrum of requirements, depending, for example, on aircraft size, passenger characteristics (e.g. demand for fast-track access by business passengers), numbers of passengers to be boarded or de-planed, and on a range of factors that influence how the time a particular aircraft spends at a particular airport affects the operations of its wider route network.

We stress here the importance of potential users in these evaluations. It is clearly the case that Ryanair's dominance at Stansted and that airline's preferences for standardisation have led to a situation where variations in services currently offered are limited. However, that outcome is properly to be interpreted by reference to a recent history in which Stansted

was part of a larger airport grouping, in which there was marked differentiation among the individual airports. Particularly since a central aim of divestiture was the promotion of inter-airport competition, it would be perverse in the extreme if the specialisation and standardisation inherited from the old market structure were now interpreted as supporting a view that this is Stansted's market, that it cannot compete in other ways (e.g. by seeking to expand its range of services), and, on this basis, that it merits regulation. If that is to be policy, we believe the effect will be to 'lock in' part of the old monopoly outcome, restrict Stansted's ability to compete, and thereby frustrate the intentions of divestiture.

The possibility of 'price discrimination markets'

Although it is not the norm in market definition exercises undertaken in the assessment of market power, it is recognised as possible to identify a market in terms of a sub-group of customers. The issue involved is invariably the possibility of segmenting the market in a way that allows higher prices to be charged to the sub-group. For this reason, such markets are sometimes referred to by UK competition authorities as 'price discrimination markets'.

With respect to Stansted, one obvious question to ask is whether or not the airport operator is able to charge higher prices for short-haul LCCs than for other users of the same or similar services? The question is not asked, although evidential points are noted that might be relevant to the question. Unfortunately, there is no coherent assessment of this evidence.

To illustrate, paragraph 4.36 notes that there is some differentiation in the charges levied by airport operators arising from charge elements that are based upon the maximum take-off weight of aircraft, and speculates that *"This could be considered to reflect in part different charges for long-haul and short-haul services."* The SMPA does not go on to ask whether it does or it does not reflect price discrimination, even though the question is central to market definition (if there is no discrimination, there is no 'discrimination market'). Instead, the mere possibility that it could reflect price discrimination appears to be considered enough.

Had the CAA asked the direct question of relevance, it would have noted that the evidence cited immediately after paragraph 4.36 indicates that the existence of weight-based charges goes nowhere close to providing support for the preferred market definition. In particular, paragraph 4.38 indicates the relative lack of success that Stansted has had in attracting more long haul traffic, and that, to date, Stansted has not proved profitable for long-haul operations given the alternatives that are available. The idea of Stansted pricing higher, by way of discriminatorily high charges for larger aircraft required for long-haul flights, to exploit market power in an area of the market where it has little or no business is, therefore, fanciful.

Chains of substitutability

Again, the SMPA fails to recognise the spectrum of aircraft sizes/weights and route lengths, and that weight-based charges will imply differentiation along a weight spectrum. In such cases, the differentiation will usually only imply separate markets if there is a significant 'break' in the chain of substitutability (in this case, between aircrafts of different sizes or routes of different length). No evidence of such a break is provided.

More generally, the SMPA discounts the relevance of analysis of 'chains of substitutability', notwithstanding (a) the inclusion of this issue in the various guidance documents produced for public authorities when assessing competition, and (b) that the factual circumstances of airport services provision – airports at a spread of geographic locations, serving passengers travelling to and from a spread of locations, and serving airlines flying aircraft with a spectrum of sizes and service requirements, on routes of varying lengths – indicate its relevance on virtually every product/service dimension of relevance.

By way of illustration, for a given motorist M living in a particular part of the country there may be a very limited number of petrol service stations that, for reasons of location, are regarded as competing directly for his/her regular business. Notwithstanding this fact, competition assessments of the sector (and there have been several) define markets over much wider geographic areas. In practice, the very limited number of service stations competing for M's business compete with other service stations, which are inconvenient for M, but convenient for other motorists whose business is valuable to them. Those more distant service stations in turn compete with service stations yet more distant from M.

In these circumstances, what authorities do when assessing competition is to look for obvious breaks in the 'chain' such as might lead to a distinct set of customers for whom supply and demand conditions are identifiably different from other customers. In petrol retailing, areas of the UK such as Northern Ireland or the Highlands and Islands of Scotland might be obvious candidates. However, assessment would then go on to examine the evidence to see whether pricing patterns are different in the different parts of the wider market. For example, it might be asked: is petrol retailing much more profitable in a particular area (as a result of exploitation of market power) than elsewhere?

Whilst easier to conceptualise for geographic issues, chain of substitution analysis is equally relevant when the physical aspects of a product or service can be characterised by analogous 'geometry' or pattern. Thus flight lengths/distances, which might affect the services required from airport operators, lie on linear scales. There is no natural immediately obvious distinction between short-haul and other routes, such as might warrant a finding of separate markets, and the SMPA does not offer any such definition.

In fact, it is possible to find quite different definitions of 'short-haul' in literature on aviation, including, but not restricted to:

- journeys of less than 500 miles;
- journeys of less than 2,000 miles;
- journeys taking less than 3 hours;
- journeys taking less than four hours.

Each of these leads to a different market definition, and hence, in a fundamental sense, the market is not defined until the meaning of short-haul is specified.

The availability of different definitions arises naturally from the spectrum of times and distances involved, coupled with the absence of an obvious dividing line. This is not unlike the shirt example. If, for some odd reason, there was a sharp increase in the price of shirts with 17" collars, the likely reaction would be substitution away from that size to adjacent sizes (16.5" or, more comfortable, 17.5"), not to much smaller or to much larger sizes; but that would generally be sufficient to make the price increase unattractive, even to the members of a size-17" cartel. The implications for market definition are obvious: 17" and 15" shirts are not good substitutes for one another, but each product lies in the same market (for men's shirts).

Supply side substitutability

The SMPA has also taken an equally incorrect approach to the analysis of supply side substitutability, and the discussion is cursory in the extreme.

At 4.41 it is stated that *"Stansted is able to offer both short-haul and long-haul services …"* On normal supply substitutability arguments, that fact implies that Stansted is part of the same market as airports that have the capacity to provide services for large aircraft, as well as those airports whose existing facilities do not. The fact that Stansted has not been very successful in competing with airports such as Heathrow and Gatwick, might simply reflect the strength of competition that it faces from those airports, not that they are in different markets; or, more likely given the history, might reflect the suppression of competition among the leading London airports when they were under common ownership.

The CAA appears to believe that the assessment should only take account of supply side substitutability at airports other than Stansted. This is an error. Market definition requires the assessment exercise to focus also on the supply capabilities of Stansted itself, and these are flexible enough to serve a variety of demands from passengers and from airlines.

The relevant question is simple enough: could Stansted quickly and readily adapt its services to serve (a) non-LCC airlines, and/or (b) long-haul flights (however the relevant distinctions are made) if the demand were forthcoming. On the basis of the evidence presented, the answer appears to be a fairly definite yes. The immediate implication is that

Stansted is part of a wider market encompassing a wider group of (actual and potential) airline customers.

Assessment relative to the 'competitive price level'

Finally on the issue of product/service markets, we note that, as is recognised 'in principle' by the SMPA, when considering the responsiveness of demand to changes in charge levels, the relevant starting point is the competitive price/charge level. In practice, it is clear from the reasoning in the document, and particularly from the sections on geographic market definition, that the CAA has systematically thought about demand responses on the basis of a 5-10% increase in airport charges from existing levels. One of many possible illustrations of this, paragraph 4.124, which is concerned with the possibility of there being a single European airports market, says of LCCs that:

"The network yield optimisation of these carriers involves a degree of switching assets between differing markets across Europe. This ability to yield manage across a range of markets is likely to provide some degree of constraint on airport pricing. However, when moving capacity from Stansted to a European airport, more so than to a neighbouring UK airport, the airline will be giving up its competitive position at Stansted and the customers it serves. The likely revenue loss to the airline of a sufficient pan-European switch of capacity from Stansted is likely to exceed the impact of a 5-10per cent increase in airport charges."

There is no reference to the competitive price here. The result is a speculative answer (there is no actual assessment of the quantum of financial loss that might be associated with the giving up of the relevant Stansted service, only what is, in effect, a conjecture) to the wrong question. The right question would have been: what would be the effect on Europe-wide deployment of aircraft in an airline's fleet if Stansted raised charges above *competitive levels* by about 5% to 10%?

At a more abstract level it can be seen that the SMPA cannot, as a matter of logic, have addressed the competitive price level. One of the most important determinants of the competitive level of aeronautical charges at an airport is the marginal profitability of supplying non-aeronautical services. The greater the additional (non-aeronautical) net income that an airport achieves from an extra passenger, the lower tends to be the competitive level of aeronautical charges. Non-aeronautical income is not, however, taken into account in the market definition analysis. The relevant questions have not been asked, and relevant evidence has not been assessed.

The geographic market

Turning to geographic aspects of market definition, we find the SMPA says the following in relation to airline route overlap decisions at paragraph 4.89:

'...the CAA would expect greater overlap in routes from the same airline at airports that are not substitutable'.

The analysis then goes on to focus only on Ryanair's routings from different airports in Table 4.1.

The stated expectation is not, however, well founded in economics. Airlines could engage in strategic behaviour designed to put rivals at a disadvantage. Thus, an airline X based mainly at airport A may establish a service serving the same destination at airport B, *precisely because airport B is a good substitute for airport A*. The reasoning here is that, if a rival airline established a service from B, it would be a significant threat to X's service from A, *precisely because airport B is a good substitute for airport A*. It may therefore be worthwhile for X to develop the route from B in order to make it more difficult for a rival airline to do so.

Such strategic behaviour is well attested in both theory and practice. Thus, 'fighting brands' have been used in a number of markets to guard against the easy establishment of highly substitutable products by commercial rivals. In sea transport – a sector that shares some important characteristics with airlines, being a transport industry in which assets (in that case ships) can easily be deployed between alternative routes – there is a history of the use of 'fighting ships' which extends back over a long time period.

The SMPA's *expectation*, cited above, is therefore an example of a cherry-picking of the economics. It is not that the economics relied on is wrong, it is simply that there are other possible explanations of the evidence which are equally 'not wrong', and no attempt is made to evaluate the alternative possibilities. That is, substantive economic analysis is lacking.

Other aspects of route overlaps that are ignored include the following:

- Even if, as seems likely on the basis of other evidence, Luton is a closer substitute for Stansted than is Gatwick, and that Table 4.1 does show increasing overlaps as substitutability decreases, this does not show that Gatwick is in a different market. Any inference that can be drawn from Table 4.1 only concerns <u>relative</u> substitutabilities. Gatwick may be a good substitute for Stansted, Birmingham and East Midlands better substitutes, and Luton the best; and all could be in the same market.

- Given the size of the samples, it does not look as if the differences are statistically significant, and this is something the CAA should have checked.

- The route overlaps could also be more apparent than real because services could be taking place on different days from different airports (or the same day at quite different timings). Ryanair have lots of routes that are only operated 2/3/4 times a week, which allows for this possibility.

- In any event, the data does not show quite what the CAA purports: easyJet from Gatwick has a 79% overlap with its network from Stansted which is not too different from Ryanair's 74% overlap at Stansted and Luton. The latter two airports are generally regarded as substitutable by the CAA, so, on the SMPA's reasoning[2], the implication is that Stansted and Gatwick are (almost) equally substitutable.

- The analysis neglects other airports, such as Southend, which would give additional observations, and help to determine whether there was any substance in the substitutability/overlap relationship.

- There is no 'chain of substitutability' analysis, and hence a relevant part of the necessary assessment is missing.

In summary, the analysis of overlaps is superficial and based on a cherry-picking approach to the economics.

Evidence on Passenger Preferences

The SMPA states at paragraph 4.96 that:

"Heathrow, Gatwick, London City, and Luton were all named as a preferred airport [by Stansted passengers], but each with less than 10per cent of responses."

The implication here seems to be that it is reasonable to discount the significance of these preferences because, for each alternative, the number is relatively low. This, however, is highly misleading reasoning. What matters more is the cumulated percentage of Stansted passengers who prefer another airport, since all such passengers will, rationally, be regarded by Stansted as passengers who might relatively easily be induced to switch to their preferred airport.

Moreover, it is switching at the margin that is relevant when assessing demand side substitutability, and even modest numbers of switchers can be sufficient to deter higher prices being charged. The discussion at this point exhibits a recurrence of the error of failing to distinguish between average or typical passengers and those (marginal) passengers who

[2] Which, to repeat, we believe is wrong.

are most likely to switch, and whose conduct is the most relevant to an assessment of substitutability. Passengers using Stansted who would prefer to be using another airport are prime candidates for having a higher than average propensity to switch, and therefore merit particularly careful assessment. They may, for example, include a sizeable number for whom Stansted is not geographically convenient, which has obvious implications for catchment area analysis (e.g. it may serve as a warning not to make the implicit assumption that airports serve only well-defined catchment areas based on proximity). The SMPA simply side-steps the relevant issues and evidence.

Evidence from Review of Catchment Areas

The SMPA states that 60% of passengers using Stansted have travelled up to 60 minutes, with about 80% having travelled up to 90 minutes. Thus, a substantial fraction (20%) of passengers are travelling more than 90 minutes. Moreover, Table 4.2 indicates that 21% of Stansted's passengers came from out-of-catchment. These figures suggest that large numbers of passengers are, at the margin, faced with choices among airports in which a single airport does not dominate along the 'proximity dimension'. Put another way, there are considerable overlaps in the catchment areas of airports at longer travel times.

Here the CAA again fails to recognise the significance of *substitution at the margin* for the analysis of market power. The attention is focused on average or typical passengers, but it is not their decisions that are the most relevant/important for assessment of market definition.

In fact the final part of paragraph 4.101 indicates that choice is being exercised on the margin, since it indicates that passengers are less willing to make longer drives to Stansted when the same flight destination can be reached from other London airports. Moreover the observed difference in driving times when routes are and are not available at other London airports could be used, via catchment area analysis, to estimate the numerical significance of this group of potential passengers, albeit in a slightly rough-and-ready way. The SMPA does not take this opportunity to evaluate the thing that matters most, the scale of switching at the margin of Stansted passenger demand: it does not ask, and does not address the relevant question.

Paragraph 4.102 does not indicate which airports overlap at 90 minutes (only at 60 minutes and 120 minutes). It is likely that East Midlands and Birmingham, at least, would give overlaps at 90 minutes or less, so this looks to be a somewhat unbalanced presentation of evidence. It is also not clear what has happened to Norwich and Southend in this analysis.

Summary of Passengers' Ability and Propensity to Switch

The SMPA states at paragraph 4.104 that:

'Airlines and a number of airport operators have stated the importance of the 60 minute catchment...'

The insinuation seems to be that the UK airports market is highly segmented by geography. If so, it appears that, yet again, the analysis has deviated from normal practice in relation to market definition. It might reasonably be stated, by an airport operator, that a 60 minute catchment area is important because the majority of its (UK-resident) customers live within such an area. However, these are not necessarily the customers with the higher propensities to switch, and it is high propensity to switch passengers who determine how much business will be lost in the face of a small but significant loss of competitiveness of an airport relative to its rivals. In any event, there is no basis for assuming that (UK-resident) customers located close to an airport will all be 'captive' customers of that airport. If the airport doesn't serve a route that a passenger wants to fly, there are obvious reasons for going elsewhere: the airport may be convenient to reach, but the services offered may not be convenient in terms of where the passenger wants to travel (see also the remarks in the next paragraph).

The cited CAA statement is also rather general and unspecific. Stansted, Luton, Manchester and Birmingham, among others, appear to us to place considerable emphasis on attracting customers from beyond a 60 minute catchment area. Although Birmingham suggested a strong focus on marketing the size of its 60 minute catchment to airlines (see paragraph 4.73), it is highly relevant that this marketing is conducted against a background in which the airport attracts only an estimated 40% of these passengers. That is, 60% of travellers in Birmingham's 60 minute area use another airport. It is therefore natural for the airport to stress to airlines that these potential passengers might find it particularly convenient to use Birmingham if airlines brought new routes to the airport (i.e. these are winnable potential customers). Such evidence seems to us to point toward the existence of inter-airport competition for passengers and airlines, not its absence.

Luton suggested to the CAA that it competes with Birmingham (paragraph 4.72), which is more than 60 minutes away. Manchester referred to a 120 minute catchment area (paragraph 4.72), and Thomson Airways also noted that Stansted competes at the margin with Norwich (paragraph 4.59). East Midlands suggested it competes with Stansted at the margin (paragraph 4.74). So, if Norwich, Birmingham and East Midlands are competitors to Stansted at the margin, the aggregated number of potential passengers involved in these boundary areas is likely to be substantial.

Much more fundamentally, however, it should be recognised that the catchment area analysis focuses on potential passengers who are marginal in the sense of facing similar driving times to different airports. Other factors affect the choice of airport, as the Birmingham catchment area data cited above indicates, among which the most important are factors relating to the airline services available at different airports (routes served, frequencies, etc.). When all factors are taken into account, it is likely that much larger numbers of passengers are potentially winnable by an airport such as Stansted than the number of passengers residing near the border of a 60 minute catchment area. Reinforcing the inference that can be drawn from the Birmingham 60 minute catchment area data – that there are many passengers for whom travelling time to the airport is not a decisive factor – evidence set out in the SMPA indicates that 20% of Stansted's (UK-resident) passengers come from areas in excess of 90 minutes' drive away, and hence many are likely to be drawn from areas where there is a closer alternative than Stansted.

We note also that the Frontier analysis of a charges elasticity referred to in Annex 3 suggests that out-of-London airports are an important consideration when assessing alternatives to Stansted. Table 1 in Annex 3 (concerned with the impact of a 10% change in airport charges on passenger numbers) indicates that the diversion to these airports as a result of the charges increase at Stansted is about the same as the diversion to Luton, an airport viewed by the CAA as falling in the same geographic market as Stansted. Thus, there appears to be significant substitutability between Stansted and non-London airports, *even before any account is taken of chains of substitutability effects which operate via Luton, and via other London airports.* On the other hand, we note that the CAA has reservations about the Frontier model. A safe conclusion is, therefore, that the magnitudes of the relevant substitutabilities between Stansted and London airports remain to be determined. That is, the market definition task remains substantially incomplete.

Airline prices faced by passengers

The comparison of average short-haul fares from different London airports (Figure 4.4) is a case of mixing apples and pears. Heathrow and London City have important business class components to their short-haul flights, but this is not allowed for in the fares analysis. More generally, the characteristics of products may differ along a quality spectrum, but this does not mean that higher and lower quality products are in different markets. Garden tools are a simple example, but there are hundreds of others.

The argument made in the SMPA therefore reflects yet another basic misunderstanding of the assessment required, which concerns the degree of substitutability. The relevant questions to ask concern the reactions of passengers and airlines to *changes* in *relative* prices, not to *differences* in price levels.

Price level differences can become a relevant indicator if it is possible to standardise in some way for differences in the 'quality' of services, as perceived by the customer. Thus, if differences in levels of airport charges are to be explored, the comparisons would be better based on economy class fares, possibly with a focus on the same route, and the selection of comparison airports should have been broadened to include at least Birmingham and East Midlands. This is not what the SMPA has done.

If such adjustments for quality are not possible, price level differences may convey relevant information if there is reason to expect relative qualities of service are reasonably constant. For then, if services are in the same relevant market, it is to be expected that the differences will be relatively stable over time; because significant changes in relativities would be impeded by the switching that they would induce. In contrast, if the airports are in different geographic markets, they will in general be subject to differing supply and demand conditions, and differences in price levels may fluctuate significantly. The SMPA does not, however, explore these points.

The need to analyse fares across a wider geography finds some (indirect) support in the DfT's *UK Aviation Forecasts* (January 2013)[3] (UKAF) and specifically in the DfT's attempts to model the allocation of passengers to different airports in the NAPAM sub-model. We note that air fares are excluded from the current allocation model. The reason given by the DfT for the exclusion is that the Department was unable to find a significant statistical relationship between fares and passengers' choice of airport (UKAF, 2.39), an outcome that was attributed partly to data problems (specifically the difficulty of getting reliable average fares given the wide spread of fares on a particular route and the lack of variability in the data used). But it might also indicate that fares generally are not too dissimilar across airports over a wide geographical area because competition between airports/airlines drives (quality adjusted) fares to equality. This line of reasoning is alluded to in paragraph 2.32 of the UKAF.

The type of statistical problem faced by the DfT has arisen in competition cases. In the white spirits (vodka, gin, white rum) case, the OFT was unable to find a statistical relationship between the on-trade price of white rum and the quantity of the product purchased by consumers. It initially concluded that the price elasticity of demand for white rum was very low, and hence that white rum could be defined as a distinct relevant market, separate from vodka and gin. On deeper inspection of the data, however, it was found that relative prices of the three spirits were broadly constant over time (an indication of a single market), and this explained why no price elasticity could be found. To measure a response to a change in relative prices, one first needs to be able to observe a change in relative

[3] https://www.gov.uk/government/publications/uk-aviation-forecasts-2013

prices, and no such change had occurred over the relevant period. The OFT, rightly, changed its view of the market in the face of the evidence.

The econometrics result here is a very important one. If a set of products or services lie in the same market, and if competition among them tends to keep relative prices in line with one another, it is to be expected that econometric models will tend not to find any significant statistical relationship between prices and quantities demanded. The technical term for the problem is multi-collinearity.

Other points on substitutability

It is stated at paragraph 4.67 of the SMPA that Stansted, Luton and Gatwick *"are only partially substitutable"*, which is just another way of saying that we are dealing with an economic context in which airport services are differentiated. As indicated earlier, the relevant questions are questions about the degree of substitutability, not about whether or not differentiation exists. More specifically, the question is whether substitutability is high enough for the services in question to be regarded as good substitutes, not whether substitutability is high enough for the services to be regarded as near perfect (i.e. 'full') substitutes.

If the inference at this point in the SMPA is intended to be that the airports are poor substitutes, there is an immediate tension with what is said in paragraph 4.66 where Ryanair states that it cannot move services because of *capacity restrictions* (not that Luton is only 'partially substitutable' in the normal meaning of those words in the context of market definition). In the end though the issue is not whether Ryanair can move services en-bloc, but whether it can move services at the margin. Elsewhere, the CAA has estimated that the ability to move a maximum of four aircraft would render a small, but significant increase in Stansted charges unprofitable.

Similarly, the SMPA fails to grapple with the relevant questions when it notes at paragraph 4.69 that:

"Looking forward Ryanair press notices show that Ryanair is seeking expansion at Manchester, Liverpool and East Midlands airports in 2013. The CAA questioned Ryanair as to the motivation behind this development of its network. In response Ryanair noted that the expansion was driven by the low level of charges at these airports. However, it noted that these airports served different markets to Stansted. When questioned about the aircraft used for the expansion, Ryanair noted that the aircraft would be coming from higher cost airports (they did not confirm which but stated it would not be from Stansted) and 11 new aircraft for this winter season."

Here, having uncovered evidence that Ryanair switches aircraft from higher cost to lower cost airports, which is indicative of inter-airport substitutability across a reasonably wide geography, the SMPA does not press home the analysis, and fails to challenge in any way the statement that Manchester, Liverpool and East Midlands serve different markets to Stansted, which is obvious question begging. In this context, it is irrelevant whether or not the extra aircraft planned for Manchester, Liverpool and East Midlands come from Stansted. Rather, the relevant counterfactual is how things would have looked if the level of charges at Stansted, relative to all other airports, had been different. For example, Ryanair capacity at Stansted might – like what was planned for Manchester, Liverpool and East Midlands -- have increased if the airports charges had been lower.

General Comments

The CAA's analysis of catchment areas in particular is rather superficial and ignores its more extensive analysis in the catchment area working paper 2011[4]. This working paper shows that the land travel characteristics of UK residents and foreign residents to and from Stansted are quite different. Generally speaking, at Stansted UK residents have longer travel times in the upper reaches of the travel-time distribution, especially holiday passengers, 20% of whom travel more than about 105 minutes to access the airport. (See Figure A.6 and A.11). In contrast, foreign residents tend to have rather shorter travel times to and from Stansted. The passenger segment that tends to travel the shortest times to reach Stansted is foreign holiday travellers (80% travel about two-thirds the time of the comparable percentage of UK resident holiday passengers). For example, A.17 shows that 80% of foreign holiday passengers travel less than about 70 minutes (foreign VFR/business travel about 80 minutes).

The same source also indicates differences in the land travel characteristics of business travellers. UK resident business travellers include a sub-group that travels the longest of all the passenger sub-groups: 20% travel for more than 120 minutes (whilst foreign resident business travellers tend to travel the least distance to and from Stansted).

These differences have important implications for the analysis of the geographic market. The short travel times for foreign holiday passengers suggest that many are focused on central London, whilst in contrast UK holiday passengers come from a rather wide catchment area. The CAA's analysis tends to obscure these distinctions by focusing on overall averages. It also largely ignores the business traveller. Having defined the product market in terms of LCCs and charter airlines, there appears to be a presumption that business travel is, for the most part, absent from the market, or by implication, has the same characteristics as leisure travel. The CAA's earlier research shows that this is not the

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

case, which again goes to illustrate the superficial nature of the CAA's current approach in the SMPA. Among the consequences of ignoring the 17% of the Stansted's passengers who are travelling on business is a failure properly to address the question of whether London City airport is within the same geographic market as Stansted.

The very wide distribution of UK resident passengers is also brought home in Figures 24 and 25 of the 2011 Working Paper, which show historic usage of airports. Notably, Stansted has drawn and is drawing passengers from Birmingham and Nottingham, both shown as green areas on the maps.

Another feature brought out in the 2011 Working Paper is that only 5% of Stansted's passengers came from an over-lapping catchment with Luton (901,012 – Table 7). In the case of Luton only 6% of its passengers appear to come from a catchment that overlaps with Stansted (498,459 – Table 8). This suggests that the CAA's restricted geographic market definition is itself actually rather thin in overlaps.

This is an important point because, to the extent that the CAA has made any reference to chains of substitutability among airports (and the analysis is very limited indeed), the notion of 'thin overlaps' appears to have been used to justify the narrow market definition, albeit the reference to this phenomenon is by no means clear and the reasoning is undeveloped. There is, however, an obvious inconsistency in doing this if the relatively thin overlaps between Stansted and Luton are viewed (in our view correctly) as consistent with a degree of substitutability between Stansted and Luton that is considered substantial enough to warrant a conclusion that both airports lie in the same geographic market. The issue here is one of consistency and balance in the treatment of evidence. In one place a reference to 'thin overlaps' is used to insinuate separate markets, in another place 'thin overlaps' do not appear to have been considered inconsistent with the existence of a single market.

Strategic constraints on switching

The concept of switching costs is a familiar one in economics, and references to such costs, and their relevance to competition assessments, are to be found in the guidelines of competition and regulatory agencies. The SMPA refers to such costs as "traditional" switching costs.[5]

The adjective here arises from a need to distinguish well established theory from a wholly novel concept, introduced by the CAA for the first time in the course of the current assessment, namely 'strategic constraints on switching'. This is not a term of art in economics, and, as can quickly be confirmed by a Google search, does not appear to figure,

[5] We note that, like many "traditions", this one is relatively recent, and its prominence owes much to the work of a current generation of academics such as Professor Paul Klemperer.

even as a marginal concept, in market power assessments (other than in the SMPA and related documents).

The concept is not clearly explained, and we have difficulty in understanding what the CAA is trying to say, but, since the notion appears to be pivotal in the SMPA's thinking on market definition, we have sought to disentangle some possible meanings.

At a basic level, the proposition seems to rest on the point that the London area is an important source of passenger demand for air travel – which should be a non-controversial point – and therefore that an airport located within reasonable proximity of London will be attractive to airlines. The second part of the proposition here should also be non-controversial: it is, in fact, one of the features of the market identified by us in our 2011 paper for the CAA on the 'platform' characteristics of airports. Thus at paragraph 4.7 we are accurately quoted as saying that: *"an airport is more attractive to airlines the greater the number of passengers who might use that airport."* There is a puzzle though, in that the SMPA rejects our 2011 paper as not relevant to the factual circumstances of Stansted (see further below), yet seeks to rely on one of our key points in trying to develop the notion of strategic constraints. We can only conclude that there is some incoherence in the SMPA on this point.

What then can be concluded from the fact that London is a major source of passenger demand? On normal economic reasoning, we suggest that the only immediate implication is that it can be expected that London will be served by more flights than a less sizeable city, and, slightly less obviously, by more routes. Put simply, a London resident can expect a much richer menu of choice from a reasonably convenient airport than, say, a resident of Newcastle.

Thus, airlines in aggregate can be expected to allocate more capacity to London routes than to routes associated with a large number of other European cities, and London routes will account for a higher percentage of aggregate revenues and profits than routes associated with many other cities. We note, however, that these points do not hold at the level of the individual airline. European airline markets are not London-centric, and it is perfectly possible to operate a profitable and competitive airline without a large presence on London routes; as many European carriers do and have done.

What matters is not whether a route includes a London airport, but whether a route is or is not profitable. It is likely that many London services are profitable for LCCs and other airlines, but not all of them are. In fact, we know that a lot of the services offered in 2007 are not now profitable: Figure 5.2 of the SMPA shows that ATMs at Stansted have fallen by over 33% during this period.

If the strategic constraints on switching arguments are taken at face value, it seems to us that they imply that there is substantial value in serving London routes even when they are not ordinarily or "traditionally" profitable (which explains why an airline might not withdraw capacity when airport charges are raised and route profitability declines). But, in that case, it is difficult to explain the large scale exit of capacity from Stansted over recent years: the 'strategic' value of the London market should have helped sustain capacity through the hard times.

It may be, of course, that the CAA has a more developed view of strategic switching costs which is consistent with the large withdrawal of capacity from Stansted between 2007 and 2012, but, if so, it is not explained. To us, the implications of the evidence are simple:

- The fall in demand caused by the recession reduced the profitability of Stansted routes, rendering some of them unprofitable.[6]

- In response to the losses arising on many services, capacity was withdrawn (switched out of) Stansted services on a large scale.

- The large scale of the adjustment was not substantially offset by 'strategic switching costs' or any similar factor.

We note also that inbound carriers do not appear to have supported the 'strategic constraints' idea, and that easyJet does not appear to be of the view that its Stansted routes are particularly profitable.

The notion of strategic constraints on switching is also difficult to reconcile with the CAA's definition of the market in that the notion puts value on serving the London market as a whole, whereas the CAA's conclusion restricts the geographic market to Stansted, Southend and Luton. But there is no argument put, or evidence adduced, to suggest that a North-East London market is strategically important. Indeed easyJet, in comparisons of Gatwick or Stansted, has said that the latter has "a much thinner catchment area", and has referred to both Stansted and Luton as underperforming bases.

It seems to us – although we are only guessing, since the SMPA reasoning is not logical – that the SMPA has relied upon implicit assumptions about the effects of capacity constraints to reach a view that different parts of London are not in the same market. As will be discussed below, such a view cannot be sustained on the available evidence.

[6] The effects of the 2006 price hike are more difficult to gauge, and it is a defect of the SMPA that the impact of the charge increases has not been more rigorously assessed.

Finally, we note again that what matters in market definition is the possibility of substitution at the margin. Even if it is considered important for an airline like Ryanair to serve London routes, that commercial judgment does not mean that its business model depends critically on maintenance of its existing level of services. Rather, it implies only that it might be unwise for Ryanair to make a strategic decision to withdraw from London entirely.

Travel originating from other airports

The CAA's analysis fails more or less completely to address passengers landing at and departing from Stansted whose journeys have originated elsewhere; that is, those for whom Stansted is the destination of the first leg of the relevant journey, not its point of origin. These are users of Stansted airport, just as much as passengers whose journeys originate at Stansted: from the perspective of an airport operator, as they arrive they look rather similar to UK-origin travellers returning home, and as they depart they look rather similar to UK passengers who are starting out on their journeys.

The omission is a major one because it implies that a substantial fraction of the customers in the relevant market (however it comes to be defined) has simply been ignored. Moreover, the relative significance of this passenger group has grown significantly over the past decade, from around 27% of Stansted's total passenger numbers to around 42% in 2011 (see SMPA Figure 3.8).

The neglect of the relevant evidence would only be justified if there were unassailable evidence that Stansted passengers originating their journeys outside the UK were identical to passengers originating in the UK in relation to the factors that determine their choice to make use of Stansted airport. Not only is such evidence missing, but information collected by the CAA over the years points the other way, to the conclusion that those originating their journey in the UK and using Stansted have some significantly different characteristics from those who originate their journey elsewhere. We have mentioned the differences in travel times to and from Stansted above, but this is only one of the relevant factors.

For those inbound (overseas) travellers destined for London, for example, it is often the distance and travelling time from the airport to Central London that matters, not, as is the case for UK travellers, the distance/time between home and the airport. The existence of a more standardised destination reduces heterogeneity among passengers (compared with UK outbound passengers), which tends to increase the substitutability among airports for this group of passengers, and hence for the airlines that serve them. Put another way, the most plausible UK comparator traveller for an overseas holidaymaker (in London) or business traveller will be a UK resident of Central London, who can look radially outwards at all of the London airports, or indeed further afield to airports such as Birmingham which have relatively speedy rail connections.

More generally, inbound tourists tend to have wider substitution possibilities (and hence more elastic demands for a particular airport) than UK resident passengers since they can potentially substitute any other destination in Europe for Stansted. We note that this is a point that Aer Lingus has made to the CAA in the context of competition for its services from Heathrow[7]. Although the destination airport to which it was referring was Dublin, the argument is similar for any holiday destination airport. Thus, Aer Lingus, pointed out that a UK-based visitor to Dublin could easily substitute a holiday to another European destination for a trip to Dublin, meaning that Dublin was in competition with many other European airports for this particular segment of passengers. We note that foreign holiday traffic has been the fastest growing element of Stansted passenger numbers over the recent period, reaching 16% of the total in 2011 (see SMPA, Figure 3.8).

So far as we can see there is no analysis of this issue in the SMPA.

The cargo market

The CAA has, contrary to both its own earlier views and to cargo market definitions adopted in European competition law cases, now defined a very narrow cargo market in terms of aeronautical services supplied for dedicated air cargo traffic movements to and from Stansted. That is, in effect, these Stansted aeronautical services are classified as lying in a market of their own. We expect that this idiosyncratic conclusion will be reversed on further reflection.

There is recognition in the SMPA that substitutability with bellyhold carriage has not yet been properly considered by the CAA, and we think that, when it has, the CAA will see that there is no evidence to support the view that there is any identifiable demand from cargo customers that their products be carried on dedicated flights.

Similarly, a fuller analysis of the demand side of the cargo market will reveal – as it has been revealed in multiple, past competition law cases – that shippers and their agents are concerned chiefly about moving products from one location to another, without damage, and within time constraints that, for the great bulk of the cargo shipped, are much less time sensitive than is the case for most air passengers. Taken together with the fact that there is no concern with the 'comfort' of the journey, this means that, for short-haul movements, shippers and their agents are much more ready to substitute road (and to a lesser extent) rail transport for air transport than are air passengers.

A typical freight movement involving air (or sea) transport will be typically be inter-modal: including a movement to an airport, an air transport movement, and a movement from the airport. The beginning and end legs of the journey will have an element of complementarity

[7] http://www.caa.co.uk/docs/2145/HeathrowS41Decision.pdf

with the ATM, but the transport modes used in these other legs can also be substituted for air freight. Thus, for short overall movements, the air leg may be dropped entirely and the goods carried by road. For longer overall movements, road may substitute for an ATM from a particular airport by carrying freight to another airport for onward carriage.

In the latter case, it is possible to consider some of the relevant matters in terms of catchment area analysis; and we note in this context that such analysis would need to take account of differences between the road (or rail) transport of freight and the road (or rail) transport of passengers. The SMPA doesn't do this, and appears to proceed on the view that it can start with the Stansted catchment area as it is has relied upon for passenger market definition. Consistency with European competition law decisions point to a much wider geographic area in which road transport can substitute for air transport.

Airports as multi-sided 'platforms'

In considering the implications of the multi-sided nature of Stansted's business, the SMPA first succinctly sets out, at paragraph 4.7, the key, relevant characteristics (henceforth the S-Y characteristics) of multi-sided 'platforms' that were identified in a paper we prepared for the CAA in 2010. These are non-contentious.

The SMPA then introduces its own, distinct interpretation of matters in claiming, at paragraph 4.8, that *"Broadly, the above arguments fall into three categories: the existence of network effects; marketing activities carried out by the airport operator to attract passengers and airlines separately to the airport; and the existence of a stream of commercial revenue driven by passenger volumes."*

It can be noted immediately that there is no reference to 'networks' or 'marketing' in the characteristics set out at paragraph 4.7.[8]

The first bullet and second bullet points of paragraph 4.9 of the SMPA make reference to a matter that is completely unrelated to the S-Y characteristics, namely whether or not airlines based at Stansted carry a substantial number of interlining passengers. The third bullet in paragraph 4.9 is also off point.

Paragraph 4.7 of the SMPA notes the points that:

[8] We did, of course, make reference to 'networks' in the paper because that word is used as a term of art in the academic literature on which we were drawing, but sought not to over-use the word for fear of contributing to potential misunderstandings on the part of economists and others who might not be familiar with the specialised usage of the term. Unfortunately, as the evidence now shows, we failed in our objective.

- *"an airport is more attractive to passengers the greater the number of airline services (more routes, higher frequencies, better connections) offered to and from that airport;*

- *an airport is more attractive to airlines the greater the number of passengers who might use that airport".*

In the immediately following paragraph, 4.8, the CAA has asked, and answered in the negative, an entirely different question: has the number of airline services developed by Ryanair and easyJet made Stansted more attractive to other airlines? The CAA should have asked: have the new services made Stansted more attractive, compared with alternative airports that might have been used, to passengers?

Similarly, at paragraph 4.10, the SMPA asks and answers an irrelevant question: *does Stansted appear to directly approach passengers and airlines as two separate, parallel user groups?* The S-Y characteristics refer only to the fact that an airport operator must take account of at least[9] two sets of demand conditions (what airlines want and what passengers want) and must determine at least two sets of prices, taking account of the interactions between them. Indeed it is an implication of platform economics that a supplier may market (including in its pricing policies) to different groups in substantially different, albeit inter-linked, ways.

At paragraph 4.12 it is said that *"Notwithstanding the above, the CAA does recognise the existence of "complementarities" between aeronautical and non-aeronautical revenue of the type identified by Yarrow and Starkie."* At footnote 89 the SMPA goes on to say that, in relation to the practice of taking account of possible impacts of commercial services revenues when setting aeronautical services, *"The CAA is aware that competitive airports typically behave in this way."*

It is, however, precisely the existence of such complementarities and their potential implications with which the S-Y paper was concerned. Its aim was to identify a set of issues and questions, arising directly from the factual context of airport operation, to which an aviation regulator needed to direct itself when assessing market power.

What appears to have happened is that the CAA, whilst accepting the relevant analytic framework, completely misdirected itself in its applications, and this has happened because of a quite fundamental failure to understand that analytic framework (notwithstanding that that framework has informed its own guidelines on competition assessment).

[9] Airports also collect revenues from retailers, who constitute a third customer group. They also supply cargo services, and a range of other ancillary services.

The SMPA has raised irrelevant questions (about interlining and the specific nature of airport marketing), the answers to which have influenced the assessment (see, in particular, the conclusion at paragraph 4.14 that *"STAL doesn't strongly exhibit in practice the characteristics of a multi-sided platform"*), and failed to ask and answer much more relevant questions about the factors influencing pricing decisions.

In order to clarify the underlying economics in a relatively brief way, we note the following:

- By complementarity in demand (acknowledged at paragraph 4.12) is meant a situation in which a factor that increases demand for one product or service (say an aeronautical service) also increases the demand for another (say a non-aeronautical service).

- In the relevant technical economics literature, the interdependencies (mostly complementary in form) in demand among different customer groups making use of airport services (passengers, airlines, retailers, etc.) are often referred to as a 'network effects'. Such 'network effects' are different from those to be found in, say, an airline network, which is characterised by the set of routes served and the connections between them. The same words, 'network effects', can be used to refer to two completely different things, which can, of course, be confusing. The SMPA has fallen victim to this confusion: it has simply looked at the wrong thing, when it should have been clear from the S-Y paper, and from the economics literature that it relied upon, that the relevant meaning was obvious enough.

- We think it is manifestly obvious (i.e. a matter of fact) that an airport located in an area of high potential passenger density will be a more attractive option for an airline to offer services to and from than an airport, with exactly similar features, located in an area of low potential passenger density. Thus, Stansted, with its proximity to London and good transport links to the Midlands and North of England can be expected to be more attractive to airlines than an airport of similar size located in Caithness.

- We regard it as equally self-evident that, other things equal, the wide range of routes served by an airport like Stansted will attract more passengers than would be the case, say, if Stansted operated only routes to and from Scandinavia.

- If these facts are accepted, it is also a matter of fact that there exist demand interdependencies, and hence 'network effects' as that term is used in the economics literature on multi-sided platforms, and as that term was used in the S-Y paper.

- Marketing activities take a variety of forms, depending upon features of the relevant economic context. Pricing is generally considered to be part of the 'marketing mix',

and indirect marketing is common (e.g. manufacture support for retailer marketing of a relevant product). A lack of emphasis on direct marketing to a particular group of customers (in this case passengers) is irrelevant for assessing that which needs to be assessed. That is, the SMPA has simply introduced an irrelevant consideration.

- The CAA recognises the existence of *demand* interdependencies when airports are competitive (see footnote 89). If such interdependency exists for competitive airports, it must also exist for unregulated airports with some degree of market power. That is because the relevant links (the interdependencies) are characteristics of the *demand* side of the relevant market, not the supply side (e.g. whether or not the market is characterised by competing airports). Thus, the above points about lack of interest from airlines if Stansted were located in Caithness, and lower passenger demand if the airport served only Scandinavia, are true whether or not there are other airports based in Caithness or other UK airports serving Scandinavia (although in this latter case, we might expect more passengers at Stansted if it held a UK monopoly position on Scandinavian flights).

- Finally, it can be noted that the interdependencies or 'network effects' that the S-Y paper addressed are implicit in the whole notion of the single-till in airport regulation. The CAA, like other aviation regulators, will take projected non-aeronautical net revenues (revenues less relevant costs) into account when setting price caps for aeronautical services. This is quite unlike the regulatory situation when there is a simple vertical relationship between products and services (the conclusion that the SMPA reaches). Thus, for example, electricity distribution services are inputs into electricity retailing, and the demand for those services is derived from the demand for electricity retail markets. In the latter case, retail prices are unregulated, distribution charges are regulated, and there is no question that retail net revenues will be taken into account by the regulator, Ofgem, when setting price caps for distribution.

To avoid possible misunderstandings about this last point, it might be added that the argument is not that the single-till approach to airport regulation is the best approach to price-capping. We are of the view that it is not. We do not, however, think that the single-till is an irrational approach, and, as a matter of fact, it is widely adopted, and, significantly, adopted as a business practice by unregulated, uncongested, commercially-minded airports. Rather, our view is that, if the SMPA's assessment were taken at face value – and its proposal to adopt a conventional derived demand in a vertical relationship approach were accepted – continued use of the single-till approach to airports would then become irrational.

The competitive pressures/constraints on Stansted from other London airports, non-London UK airports, and non-UK European airports

There are a number of defects in the SMPA's assessment of competitive pressures on Stansted, most of which are associated with a move away from previous CAA views and the discounting of a considerable body of research undertaken by the CAA over the years. The general tendency is to give insufficient weight to evidence suggesting competitive effects, leading toward a policy stance favourable to greater regulation.

The tendency is reflected in the market definition conclusions, which, as we have noted, deviate from past previous conclusions not only of the CAA but also of competition authorities such as the Competition Commission and the Office of Fair Trading. Both the market definition conclusions and the subsequent analysis of competition/market power are rooted in the same misconceptions about the economics of airports and airlines.

We will now examine some of these misconceptions in more detail, starting with a few general observations on the wider economic context, and then move quickly to perhaps the most fundamental of the SMPA's flaws, the failure to understand and take proper account of the implications of the interdependencies in demand between airlines and passengers. This has already been partly covered in the section above dealing with the multi-sided 'platform' nature of airports, but the points, though obvious in nature, are so fundamental to the analysis of competition that they merit further development and explanation.

The general context

The UK mainland is an island of relatively small size, is densely populated, and has a large number of airports of varying sizes. The inhabitants of all the major conurbations are within relatively short travelling distances of at least two airports that have been developed to handle significant numbers of passengers, and this is true also of the Belfast area of Northern Ireland.

Airports are not, therefore, what are called a 'natural monopoly', a market structure in which it is efficient for only one operator to serve an entire market so that consumers have no choice of supplier (the most cited examples of which lie in 'pipes and wires' businesses': high voltage electricity transmission and lower voltage electricity distribution, high pressure gas transmission and lower pressure gas distribution, and the transportation of water).

In market economies it is normal to find that the bulk of public price regulation is found in naturally monopolistic activities, although far from all natural monopolies are price regulated. The 'only shop or pub in the village' might, on a narrow market definition be regarded as a natural monopoly (the local market will not sustain two, profitable, shops or pubs), but it would not be price controlled, principally for two reasons:

- It is likely to be under strong competitive pressure from alternatives/substitutes outside the market (more distant supermarkets, drinking at home).

- The harm caused by regulation would not justify the benefits.

Outside of socialist economies, the vast majority of economic activities that are not naturally monopolistic are not subject to price regulation, although there are exceptions, of which the airport sector is one. It would take us too far afield to consider the reasons for the exceptions, which tend to be both highly varied and to involve context-specific political considerations of one kind or another. We simply note that, even if the SMPA had provided substantiated reasons for believing that Stansted had significant or substantial market power, that alone would not normally be considered nearly enough to warrant the imposition, or the standing threat of imposition, of price controls. Rather, the UK, and the EU generally, has a well-developed, common approach for addressing the problems that arise when a single enterprise enjoys a position of substantial market power, namely competition law. More specifically, Chapter II of the UK Competition Act and Article 102 of the TFEU impose 'special responsibilities' on such enterprises in the way that they conduct their businesses.

Failures of analysis: airport, passenger and airline interactions

Two questions, and the (obvious) short answers to them should have guided the CAA in the first stage of its assessment of the competitive pressures on Stansted that arise from the existence of other airports:

- What are the main factors that determine the airport chosen by a particular passenger on a particular occasion?

- What are the main factors that determine the usage of a particular airport by a particular airline?

The first of these can be split into two, depending upon whether the choice is of an originating airport or a destination airport.

Passenger choice of airport

We suggest, in the expectation that it will be non-contentious, that important factors in the choice of airport, where such choice is feasible, are:

- The airport offers a flight to an area where the passenger wants to go.

- If available, the characteristics of the flight offered: convenience of time of departure; flight frequency; whether the flight is direct or indirect; the price of the flight; etc.

- The convenience of the airport.

- The services offered to the passenger whilst at the airport.

These are not the only factors, but, taken together, they dominate the choice process.

The considerations are similar for inbound passengers – they will prefer flights to destination airports that are convenient for their point of final destination, and they won't typically use airports located in areas that they do not want to visit – although features of the land journey to and from the airports of origin and destination tend to differ significantly.

It follows that airports can compete to attract more passengers by improving their own services, including by improving convenience by means of better surface access; but, crucially, they can compete by increasing the attractiveness of the services offered by airlines. It is the second point that gives rise to the 'platform' effects that the SMPA has chosen to discount, but which are central to the issues.

Airline choices

Consider the effect of a significant increase in charges at an airport A relative to other airports. This raises the costs of the airlines using A.

If A is a 'must go to' airport for <u>all</u> its passengers, because it has what approximates to a captive passenger base, competing airlines at A might be expected to pass-through the higher charges into passenger fares, since it represents an increase in the short-run marginal costs of all operators. Demand for flights would likely fall a little – some passengers would choose not to travel, or would switch to surface transport – and there might be some minor adjustments in the services offered, but the profitability of airlines would be largely protected, and the frequency of service would be largely unchanged.

Next suppose that some of the passengers who use A have a choice of airport. The position facing the airlines becomes more difficult. Higher fares can now be expected to lead to a bigger loss of business because, in addition to passengers not travelling or switching to other modes of transport, there would be switching to services offered at other airports. And although it is a matter for empirical assessment, in a context like UK airports, where there are several alternatives at reachable distances, we would expect that the airport switching effect would be significantly greater than the non-travelling and mode-switching effects.

In this latter context (of competing airlines, operating routes close to the margin of profitability, from different airports), it is to be expected that the response to higher airport charges will be a much more significant adjustment in the services offered from airport A.

However reduction in airline services offered at airport A will further reduce the passengers making use of A (over and above the direct effect of fewer passengers using given services at A because of a higher price): if a route is withdrawn, potential customers wanting to fly that route will choose a different airport, or a different transport mode, or simply not travel. Moreover, where an alternative airport is used, it may potentially be at some distance from A: to repeat a key point of the 'platform' analysis, there is not much advantage to a passenger from an airport that is convenient but does not offer the routes that the passenger wants to travel.

In technical economic terms, there is a discontinuity in the airline response to an increase in costs which greatly leverages any impact on passenger demand arising from the fact that it becomes a little more expensive to use airport A. Withdrawal of a route from airport A is, in terms of its impact on demand, economically equivalent to raising the fare for flying that route to and from airport A to an unaffordably high level. All of the demand for the route that is served from airport A is lost, to the airport as well as the airline.[10]

To illustrate: consider an initial demand for a route via airport A of 100. Airport A now raises its charges slightly, relative to other airports. The charge increase makes serving the route unprofitable, but a small increase in the airline fare enables the airline to just cover the relevant (higher) costs. Because of the slightly higher fares to and from Airport A, passenger numbers fall a little, by say 5, to 95. Suppose the airport next raises its charges again, and there is no fare price at which the profitability of the route can be maintained. The airline now withdraws the service from airport A, and demand drops by 95 *to zero*.

This 'leveraging' of the demand responsiveness is critical to both airline and airport economics, but its significance is consistently ignored in the SMPA. It is, for example, one reason why economic assessments of inter-airport competition can only appropriately be conducted within a fairly wide geographic context, which allows for the impacts of <u>all</u> potential route losses on airport usage to be taken into account. Before considering this aspect of the issues, however, this is a convenient point to note the implications of such 'leveraging' for buyer power.

Buyer power

The points made above have implicitly assumed that only one airline serves the relevant route from airport A, so that withdrawal of the route by the airline means loss of the route

[10] The effects from service reductions might be expected to be somewhat less if they take the more limited form of a reduction in the frequency of services. In the case where the route is lost to an airport, there will also be mitigation for those travellers who opt to switch to a different destination that continues to be served from airport A. Such might be the case for those holiday travellers who have only weak preferences for a particular destination. Note, however, that this point applies to passengers initiating their journey at A, not to those arriving at A on the first leg of their journeys. If airport A loses the route, *all* inbound passengers will be lost. This is another difference between originating and visiting passengers, and it shows again why the SMPA analysis is deficient in the absence of an assessment of the behaviour of the latter.

to the airport. This will typically be the case for an airport such as Stansted, because of the dominant position held by Ryanair at the airport. The effect on the airport will be dampened, however, if two or more airlines serve the route from A since, in this case passengers wishing to travel the route using airport A will still be able to do, by switching to another airline.

It can still be expected that there will be some reinforcing, or leveraging, effect on demand from the withdrawal of service by one airline, since the transfer of demand to one (route monopoly) or other (tighter route oligopoly) airline is likely to make it easier to pass through airport charge increases into fares on the route by those airlines continuing to operate it, and, at least in theory, even potentially allow fare increases that are greater than the cost increases without any loss in traffic, or an increase in traffic, carried by the remaining airline(s) relative to the pre-charge-increase position[11] (a familiar effect whereby withdrawal of capacity tends to lead to higher prices). The higher airline fares from airport A will, in turn, tend to have a further negative effect on passengers using airport A. However, in this case, there are reasonable grounds for expecting that the negative impact on the airport of a service withdrawal by one airline will be somewhat less than when the route is no longer served from A.

It follows from the above that, in assessing the responsiveness of passenger traffic at an airport to potential increases in charges, an important factual issue to address is the extent to which the routes served by the airport are served by only one airline. It is in these cases that the impact of service withdrawals are likely to have the most impact on the airport business.

A relevant aspect of the factual evidence that has been missed by the SMPA is, therefore, the extent to which routes served by Stansted are served by just one airline. As Table 1 below shows, it is the overwhelming majority of routes, the great majority of which are operated by only one airline, Ryanair. Since 93% of routes are operated by only one airline, if only a fraction of these routes are near the margin of profitability, Stansted is potentially vulnerable to the loss of significant business.

[11] The rival airline may be able to increase both its price and the number of passengers carried, and, depending upon the precise circumstances, may even find it to add more capacity of its own to the route.

Table 1: Current Stansted Routes (winter + summer)

	Number	Percentage of total
Routes	148	
Routes operated by one airline	138	93%
Routes operated by Ryanair only	108	73%
Routes operated by easyJet only	21	14%
Routes operated by two airlines	12	7%

We emphasise that these points, which arise from the demand interdependencies between passengers and airlines, are *additional to* the standard issues that arise in the assessment of buyer power in competition assessments. It is also the case that an airline that accounts for a significant slice of an airport's business can bargain for lower rates by, among other things, threatening to take significant amounts of its business elsewhere.

It is generally recognised that, in such bargaining, the amount of influence that the buyer can exert on price will depend upon the credibility of the threat. There is little point in, say, Ryanair threatening to move aircraft elsewhere, if there is nowhere else that it would be feasible to move to. Similarly, a threat would lack credibility if, by moving services, other airlines would simply come in to replace the withdrawn services, *because those services continue to be profitable.*

Significant weight appears to be placed on this replacement effect in the SMPA (e.g. at paragraph 5.45), but it is not noted, as it should have been, that, in the relevant assessment context, it depends upon the route remaining profitable after the hypothetical (significant) airport charge increase is levied, which suggests that the route would have to have been supernormally profitable before the hike. The basic point is simply that an increase in airport charges can be expected to reduce the profitability of the route for all airlines that might potentially operate a particular route. At a minimum, therefore, the route profitability position requires investigation, not least because one of the obvious possible explanations for non-movement of capacity away from an airport is that, before the price increase, airport charges were below competitive levels.

In contrast to the usual bargaining effect, the leverage that we identify, which is linked to the economics of platforms and the S-Y conditions, is based simply on two facts: (a) only one airline serves the route from the given airport, and (b) the service has become unprofitable. Unprofitability implies that it is optimal to withdraw capacity, and that it won't simply be replaced by new capacity – unless, of course, the new airline entrant is significantly more efficient than the incumbent. Whilst the relative efficiencies of incumbents is therefore an aspect of the factual context that is relevant to the assessment (of competitive constraints on airports), we doubt that it is a difficult issue to settle in the current case: Ryanair and

EasyJet are generally regarded to be highly efficient airlines, as evidenced by their performance records.

In summary, in assessing the competitive pressures on Stansted, an important factual consideration is the number of routes served by only one airline from Stansted, supplemented by information on the numbers of passengers who travel those routes (to check whether or not the total numbers are trivial in relation to the total number of passengers who use Stansted). The SMPA does not appear to consider this relevant evidence.

Substitutability and complementarity 'at a distance'

Returning to the economic linkages between airlines and airports, it can be noted first that, if a service is withdrawn, or a frequency reduced, at Stansted, there will be a corresponding negative impact effect on passenger demand at the destination or origin airport, say airport B. That is, other things equal, passenger demand will fall at that airport also, which, in economic terms, implies a relationship of complementarity between the two airports. The effect exists no matter how small or large the distance between Stansted and airport B.

The effect on passenger demand can, however, be expected to be significantly less at airport B, since if travellers substitute a different airport in the UK for the withdrawn service, their new flight may still fly into and out of airport B. Moreover, the relevant airline may choose to use the capacity released from the Stansted service closure to serve another route to and from airport B. The latter possibility can be expected to occur with greater frequency in circumstances in which the airline concerned has a base at airport B, and/or is headquartered in the country in which airport B lies.

More generally, if aircraft capacity removed from Stansted services is deployed to other European routes – rather than being mothballed, or sold to carriers operating in other parts of the world – the impact can be expected to be a positive effect on passenger demand at the two airports that define the new or expanded route. Since, in consequences of responses to a hypothetical charge increase at Stansted, demand at these airports has increased, the airports are, in an unambiguous sense, economic substitutes for Stansted. This is again quite irrespective of their specific geographic locations. Since the airlines that currently use Stansted are focused on serving routes in Europe plus (Egypt and Morocco), all European airports are immediately relevant when considering the competitive constraints/pressures on Stansted; and since Stansted could readily serve non-European routes, as larger provincial airports (e.g. Birmingham, Glasgow, Manchester) routinely do, so too are airports in other parts of the world.

The result here is slightly counter-intuitive, but then many of the most powerful results in economics are. Indeed, were it otherwise economists would be redundant: everything would be common sense. It is a fault of the SMPA generally that it resorts to common sense

(sometimes called 'do-it-yourself' economics) all too frequently, substituting it for substantiated reasoning.

The fact that, in aggregate at least, European airports are economic substitutes for Stansted, does not necessarily imply that they all lie in the same geographic market. Market definition groups together relatively close substitutes, and it should be clear from the discussion above that the effect of capacity withdrawals from Stansted on other airports could be relatively diffuse, considering the range of options open to the airline and the large number of airports involved.

It is, however, a working principle of competition assessments that competitive pressures can emanate from outside the market as well as from inside, and that it is the cumulative effect of such pressures that matters for pricing of the airport being assessed. Thus, if Ryanair withdrew four aircraft from Stansted services, and used them to increase capacity on four different European routes, involving eight different airports, then, although the total effect would be spread out over eight airports (rather than say two, if all the capacity went to serving two airports), the cumulative effect on Stansted is still the loss of four aircraft, with all the consequences for passenger numbers and airport revenues that that implies.

The empirics of route profitability and leveraged passenger losses

A perusal of easyJet annual reports and investor presentations reveals frequent reference to returns at the margins and, in turn, to the constant re-appraisal of underperforming routes which are routinely closed and replaced by new routes. The route churn in 2009 for easyJet, for example, was 10%, meaning that 10% of routes were withdrawn and assets redeployed to serving other routes (or taken out of service). Sometimes under-performance leads to decisions to close operating bases (such as Madrid, East Midlands and Dortmund) or to move aircraft out of bases: a March 2013 investor presentation noted that two aircraft (of eight, and hence 25% of the total) were to be moved from Liverpool so as to reallocate capacity to bases with higher returns.

The general picture over the last few years has been a relative shift in easyJet activity towards continental Europe where capacity has been increased substantially, reflecting better returns (see slide 29, easyJet 2011 interim results). The 2009 Annual Report noted that, for the first time, half of easyJet's customers came from outside the UK. Some of the capacity increase in Europe has been at the expense of the UK. In this context it is notable that both Luton and Stansted have been mentioned by easyJet as underperforming bases, a view that does not stack up easily with the proposition that Stansted routes are strategically valuable in some sense (undefined by the SMPA).

A profile of the returns, route-by-route, across the whole of the easyJet network in financial year 2012 is shown in Figure 1 below (taken from easyJet's March 2013 investor presentation, slide 18). It distinguishes routes established for more than 3 years from more

recent routes and benchmarks each route in relation to a 12 per cent Return on Capital Employed (ROCE). There does not appear to be an overall pattern that strongly distinguishes the returns of longer established routes from those established more recently.[12] A number, perhaps around 20%, of routes have returns well in excess of the 12% benchmark, but the returns for about half the routes fall below this benchmark. There is a number, albeit very small, of routes with negative returns.

Although the above picture encompasses the whole of easyJet's network, the broad picture will likely be replicated for each of easyJet's operating bases; some base routes will perform better than others and an operating base as a whole might have a route-return profile that lies towards the left hand side of Figure 1 below, or it might have a profile more to the right, signifying a relatively underperforming base. As noted, easyJet has said that it regards Stansted as an underperforming base.

The ROCE for each route shown in Figure 1 will reflect its average revenue yield (fare yield plus ancillary revenues) and load factor. The average fare yield for each service will in turn reflect seat sales at a wide range of offer prices, illustrated in part by Figure 2 (from 2008 easyJet Analyst and Investor Day Presentation, slide 108). It shows, for the Gatwick-Malaga route (which easy Jet flies in competition with BA) the average fare at which a seat was offered for sale by number of days before departure. For this particular service, easyJet's entry fare was about £25, offered three months before the departure date. The fare offer increases (not quite monotonically) towards departure, at first steadily but finally more rapidly (to over £100).

This process of managing the fare yield, a so called Low-High pricing strategy, is a process of price discrimination[13] that is designed to maximise asset utilisation by maximising the aircrafts load factor and, in turn, maximise its revenue yield.[14] But it is a process that might be expected to lead overall, for any particular service, to a (large) number of marginal purchases because there is not one product but many, each selling at a different price and at each price one might expect a purchase at or close to the margin.[15] This process of dynamic pricing is a form of second-degree price discrimination that is reasonably effective at abstracting consumer surplus (what the passenger is willing to pay for the journey, less any incremental cost in carrying that one extra passenger).

[12] This suggests that new routes can establish themselves quickly.

[13] See C. Alves and C. Barbot, Price Discrimination Strategies of Low-cost Airlines, Journal of Transport Economics and Policy (JTEP), Volume 43, Number 3, September 2009 , pp. 345-363(19). The paper finds that the existence of different probabilities of consuming the good and of different willingness to pay makes it possible to separate markets in time and profitably to price discriminate.

[14] It is a constrained maximisation problem. Capacity supplied to the market is predetermined by the aircraft type; seats are offered at different prices (differentiated by time of booking) with the aim of maximising revenues which is achieved by maximising load factors.

[15] The purchaser at any particular offer-price is foregoing slightly different products (a seat purchased a day earlier or a day later) each offered at a small difference from the purchase price.

If an airport increases its charges to the airline, the airline has to appraise the impact of this increase across its portfolio of services from that airport. For each service it has to decide whether and to what extent the increased charge is passed through to the (potential) passenger, or to what extent in the short term it is absorbed in the margins. To the extent that the fare is passed through to the passenger, the effect will be to increase, in a vertical direction, the offer curve shown in Figure 2 below. This will have a negative impact on demand, and load factors will be reduced. If, alternatively, the airline's initial reaction is to absorb the increased charges in margins, this will impact directly upon the return profile of each of the routes in the portfolio of routes from that airport. If we imagine a profile such as that shown in Figure 1 below, the effect will be to push the ROCE of each route downwards, rendering marginally profitable routes loss-making and pushing more profitable routes closer to the margin.

For low cost airlines characterised by a strategy of having homogeneous fleets centred on one aircraft type, the size of the production unit (i.e. the aircraft size) cannot easily be adjusted to a fall in demand. Consequently, output adjustments take place by cutting route frequencies, cutting entire routes and, in the extreme, by closing operating bases. As discussed above, the important point is that an increase in airport prices might trigger a small initial negative response in consumer demand (or a reduction in margins if costs are absorbed) but because of lumpiness or discontinuities in the supply of seats, determined by a production unit (aircraft) of fixed size, a small reduction in passenger demand (across all routes) could lead to a much larger reduction in output if capacity at the margin is removed. The loss of passengers to the airport is the sum of the airlines' capacity reduction plus the lower loadings on the remaining flights if fares are increased; the initial demand elasticity is effectively leveraged through the subsequent removal of capacity by the downstream operator.

An interesting and highly relevant feature of the curve shown in Figure 1, which implies that a large number of routes are of relatively similar profitability (since the results are shown for one year, it may be flatter still over a two or three year period, and such a longer period may be more relevant when deciding which routes to continue operating). What this means is that, if charges at a Stansted are raised, leading to a lowering of profitability for Stansted routes, those routes may move many places to the right in the pecking order of profitability shown in the diagram. Flatness means that small changes in relative profitability can lead to significant changes in route structure.

Figure 1 (easyJet's March 2013 investor presentation, slide 18)

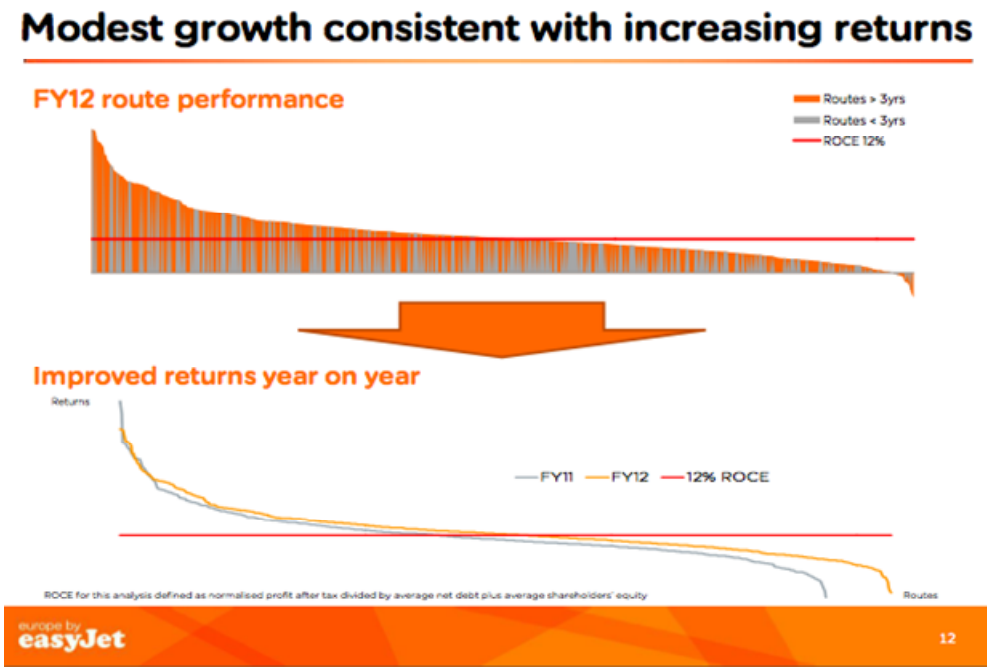
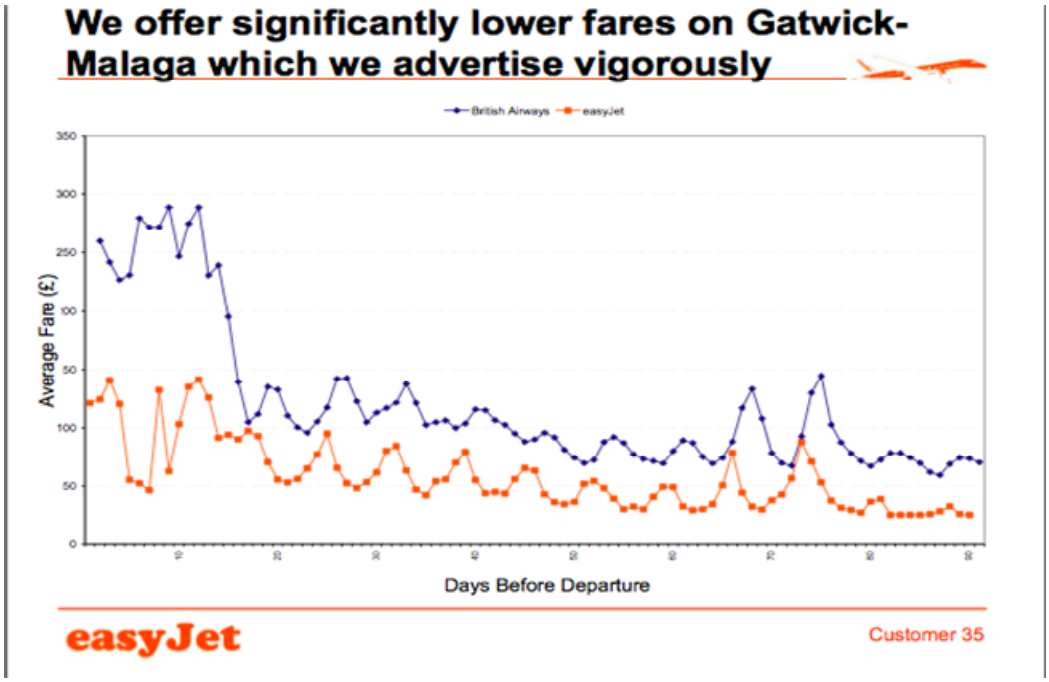


Figure 2 (easyJet's 2008 Analyst and Investor Day Presentation Slide 108)



The curve also illustrates the importance of assessing effects at the margin, which we have consistently stressed above, because the significance of the point is so consistently neglected in the SMPA. A significant number of routes are highly profitable, and will be retained even if there are substantial changes in the relevant airport charges. These routes, because they are so profitable, serve to raise the *average* ROCE. What matters, however, is the flatness of the curve at the margin, the ROCE level at which routes will be dropped, since it is here that a descent of a Stansted route down the pecking order is likely to lead to a decision to withdraw capacity.

The leverage point can be illustrated with some hypothetical numbers based loosely on numbers cited in the context of the April 2013 charges increase at Stansted. We stress hypothetical, because the effect of an actual charge increase will depend upon the starting level of charges, including in particular on whether the starting level is above, at, or below a competitive charge level. For the reasons given above, on the basis of the material presented in the SMPA, the competitive level of charges at Stansted remains undetermined.

Suppose that Stansted's charges are increased by 6 per cent *whilst charges at other airports remain the same* (the relevant hypothetical for assessing market power). On the basis of the CAA's calculated charges elasticity of about 0.5 and a passenger base of approximately 17.5mn (which is around the Stansted level), we might expect a loss of just over 0.5 million passengers.

However, suppose airlines using the airport would, as a consequence of the charges increase, reduce capacity by 9% by cutting frequencies and withdrawing routes (this is the capacity response that Ryanair indicated that it was contemplating in response to the April 2013 charge increases). If the reductions are concentrated on services with lower passenger-to-capacity ratios the fall in passengers might be somewhat less than 9%. However, even a figure as low as 4.5% passenger reduction (because capacity is no longer available, and calculated at given prices[16]) implies a leveraged increase in the passenger price elasticity of demand from 0.5 to 1.25, an increase of 150% in the estimate. Alternatively, if the capacity reduction by airlines were, say, only 4%, leading to a 2% loss of passengers via service reduction effects, the overall impact is still a leveraged increase in the passenger elasticity to 0.83.[17] Even such small adjustments in the services offered by airlines at Stansted can, therefore, be sufficient to reverse the CAA's (rather tentative and speculative) conclusions about Stansted's ability to set supernormally high airport charges.

[16] Technically we are assuming passenger demand that is a function of both air fares and services offered at an airport, each of which will be affected by airport charges, and totally differentiating that function with respect to airport charges.

[17] It is to be recalled that the CAA's estimate of the critical elasticity, below which setting supra-competitive prices becomes profitable is 0.7.

Once more, the defects of the SMPA can be seen to be linked to the flawed dismissal of the 'platform' economics of airports. Stansted's attraction for passengers depends very heavily on the services that are offered by airlines at Stansted. There will be some loss of passengers if higher airport charges lead to higher air fares for an unchanging set of flights to and from Stansted, but potentially much larger losses of passengers if, as a result of higher Stansted charges, airlines choose to offer fewer services at Stansted than they otherwise would have done (whether by withdrawing capacity *or by expanding capacity less rapidly than they otherwise would have*). Even very modest adjustments in service levels are capable of fundamentally changing the payoffs from increasing airport charges, a point that the SMPA has failed to notice.

Capacity constraints

The SMPA attaches considerable significance to the existence of capacity constraints at Heathrow, and to the chilling effect this has on competition among London airports. The reasoning is, however, of the do-it-yourself economics kind, and, whilst it is the case that the competition for extra volume might be temporarily more intense if all London airports had excess capacity, a moment's reflection will indicate that the concept of a long-run competitive equilibrium is, in fact, difficult to reconcile with persistent excess capacity in a particularly industry or market. Even in the most competitive of markets, capital needs to be scarce some of the time in order to generate positive returns on investments. Capacity constraints cannot, as a matter of general economic principle, be inconsistent with competition in a market. Nor can it be right that, in those periods when capacity constraints do bite, and when some companies might be capable of earning supernormal returns on capital, this be taken as a reasonable reason for imposing price controls. Markets simply cannot operate effectively in such adverse policy conditions.

Given the simplistic approach to capacity constraints at Heathrow taken in the SMPA, the following points are intended to provide a fuller picture of the relevant issues.

- The first point to note is that capacity constraints are a feature of the supply side of the market, and therefore do not affect demand side factors such as the (unconstrained) degree of substitution in *demand* among products and services, including products and services that are distinguished by their locations. If, say, Heathrow is capacity constrained, all that will mean in a competitive market is that the price will be driven up to a level that 'clears' the available capacity. Put another way, charges will rise to a level where the volume of services that customers wish to purchase is equal to the capacity of the airport to provide them.

- The concept of capacity is, in practice, quite complex, since there are a number of bottlenecks that can serve to limit the amount of traffic (whether of passengers or

ATMs), such as length of runway (which constrains the size of aircraft that might be used), number of runways, number of stands, aircraft parking space, terminal space, number of terminals, surface access infrastructure, air traffic control constraints, and so on. By working on these, in conjunction with developments in aircraft design (including size) and in air traffic control, it has been possible to increase the number of passengers, year-on-year, even at the most physically constrained airports like Heathrow.

- Not all aircraft fly with 100% load factors, and it is clear that there is no 'hard' constraint on the number of passengers that can be served. Rather the constraints are better viewed as giving rise to a situation in which the marginal costs of serving additional passengers are steeply increasing in the short-run.

- For current purposes, however, we can ignore many of these complexities, because even when the capacity constraint is of a simple, hard and fast type – e.g. airport A can service no more than N passengers per year – it is not the case that the capacity constraint necessarily precludes use of its services by new airlines, serving new routes. Under competition, the market will clear, and those who use the constrained facilities will be those willing to pay the most. New entrant airlines can secure slots, if they are willing to pay more for them than at least some incumbents, an outcome that can be observed at Heathrow.

- Whether a hard capacity constraint at a major airport is likely to affect competition more widely is in part dependent on how many competing airports there are. In theory, if there were only one alternative airport, then the market power of that alternative would be increased. On the other hand, if there are several alternative airports, all the capacity constraint means is that those several alternatives will compete for the extra volume that might be available as a result of congestion. Since overspill traffic from Heathrow can potentially be handled by a number of other airports, there is no immediate reason to think that it will significantly weaken competition among those airports. We note also that, to the extent that Heathrow capacity constraints are relevant, there will be a focus of competing airports on winning business that would otherwise have gone to Heathrow, which lies on the west side of London. If this overspill demand is regarded by the CAA as having significant implications for Stansted pricing, there is an obvious tension or inconsistency between this view and the conclusion that Heathrow and Stansted are in different geographic markets.

- Speaking generally, the relevant economic points are little different from those applying to other markets in which an economic resource is physically constrained in its availability. The amount of land in Kensington and Chelsea is physically limited,

and the location is highly attractive. Stretching language a little, it might even be said that a place in the Borough is 'strategically important' for some of its inhabitants. But none of this prevents companies wishing to make use of K+C land or buildings for business purposes from so doing: they simply have to pay the market price, in competition with everyone else.

- Nor would it usually be sensible to define K+C land as a distinct geographic market. Although the average price may be significantly higher than in other Boroughs, there are obviously boundaries around which the economic valuations of the scarce input (land) will be similar in and out of K+C. An economic study that sought to analyse land and property prices in K+C independently of supply and demand elsewhere in London would be patently absurd, and the obvious way to proceed is to define a wider geographic market in which more localised variations in market clearing prices can be studied.

- The position in airports is, of course, complicated by regulation. It is regulation of charges at capacity constrained airports, leading to charges set at lower than market clearing levels, that creates a situation in which there is unmet demand: more airlines want slots at the regulated price than there are slots available. *Depending upon how regulators address the resulting problems* (and there are alternative ways of doing things), it is possible that capacity constraints combined with regulation at below market clearing (competitive levels) will create barriers to entry, and hence be a source of market power. This can happen, for example, if incumbents with slots at capacity constrained airports are prevented from transferring use of those slots to other airlines in return for a payment that reflects the slots' economic value. Crucially, however, the effect on competition here arises from sub-optimal regulation, not from the existence of capacity constraints.

- The SMPA's market definition obscures this point. It has the effect of insinuating that any market power that might be found at Stansted derives from its dominant position in the very narrow market that has been defined, thus drawing attention away from sub-optimal regulation as the prime suspect in the event that competition problems are found. It should be non-contentious that the market definition exercise should facilitate the assessment of competition and market power, and that criterion is not satisfied by the approach taken in the SMPA. The approach has the opposite effect, of hindering clear analysis.

Even with sub-optimal regulation, a capacity constrained airport will itself compete with a nearby non-capacity constrained airport (i.e. the latter does not just continue to compete with other, non-capacity constrained airports), and sensible economics will take a wide enough view of the market to encompass the relevant interactions. For example:

- If Stansted raises its charges, it is trite economics that this can be expected to increase the demand for Heathrow services from passengers and airlines. Thus, excess or unmet demand for Heathrow services will increase. As a result, the level of unmet demand for Heathrow services from, say, airlines operating routes from Birmingham (who, like Stansted airlines, would like Heathrow slots if they could get them at the regulated price) may increase (any extra capacity that is squeezed out of Heathrow will be allocated across a wider, previously unmet demand). The result will be some spill from Heathrow to Birmingham. Thus, via an indirect route through competition for incremental Heathrow capacity, higher Stansted charges can be expected to lead to switching of traffic from Stansted to Birmingham.

- Airports compete on more than price. Some types of passengers are worth more than others, for example because they are more intensive users of airport facilities (e.g. some shop more than others). A capacity constrained airport can, therefore, compete by seeking to ensure that it serves the most profitable passengers. The SMPA approach cannot encompass this type of competition because, it has, in effect, assumed it cannot be other than very weak. It fails to recognise the possibility that Stansted's difficulties in diversifying its customer base may be the result of the intensity of the competitive pressures from Heathrow along this particular dimension of competition. Alternatively, it may simply be that, when Stansted was under common ownership with Heathrow and Gatwick, BAA was relatively indifferent as to where different types of passenger were served, and that this is a dimension of competition that can be expected to intensify following divestiture. Ironically, the SMPA's analysis, by looking backward to outcomes under common ownership, rather than forward to outcomes in the new market structure, appears to be leading to a form of regulation that could well impede such pro-competitive developments.

Comments on the Leigh Fisher study and the competitive price level

An important proposition upon which the CAA's 'minded to' conclusion rests is that Stansted is already pricing above the competitive level, notwithstanding that early on in the SMPA the formidable difficulties of estimating a competitive price level are explicitly recognised. Further, these difficulties are given as reasons why the CAA has been unable to apply the SSNIP test: if a reasonable estimate of the competitive price were available, the application of the test becomes much more straightforward, resting on an assessment of the extent to which airlines and passengers alike would make less intensive use of Stansted in the event of price hikes. It appears, therefore, that the SMPA takes rather different positions about the feasibility of estimating the competitive price at different points in the document.

In reaching its later judgment, in Chapter 6, the CAA relies heavily on the results of a benchmarking study carried out by its consultants, Leigh Fisher[18]. However, the Leigh Fisher study was not set up to answer the question of Stansted's competitive price level; no reference is made to this issue in the study aims (1.2 of the consultant's report). Indeed, the final section of the consultant's report (8.5) says "*price comparisons could (subject to further analysis that is beyond the scope of this study) provide a proxy for a competitive price, albeit generated from comparators operating in various degrees of necessarily imperfect market conditions...*". This comment indicates that the authors of the report do not themselves consider their report to have addressed the issue of a competitive price for Stansted.[19]

The study included comparator airports from Asia, Australia and continental Europe, as well as the UK. Price comparisons (revenues per passenger) were based on revenues calculated from published tariffs, aeronautical revenues or total revenues; airport numbers and sample selection depended on which benchmark was chosen. There are a number of fundamental problems with the analysis but foremost is the question of its relevance to the issue of competitive prices. Competitive prices are set within a market framework and it is only within the context of a specific market that one can usefully compare the price levels of particular firms (after considering, amongst other matters, the competitive constraints they face, and the degree of market segmentation and product differentiation) [20]. To even begin to make sense of the results from this study – and as noted there are other serious limitations – it has first to be accepted that Stansted is in the same airport market as Melbourne Australia, or Hong Kong, which is patently absurd.

To elaborate, in guidelines for the assessment of geographic markets in the context of the enforcement of EU competition law, the European Commission has said that a conclusion that products and services lie within the same geographic market rests on showing that the conditions of supply and demand are similar in the different geographical areas. If the geographic markets are different, the implication is that demand and supply conditions differ, and hence, crucially for the current issue, that the competitive prices in one of the markets cannot be taken as a proxy for the competitive prices in the other market (which, definitionally, are determined by different supply and demand conditions).

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[18] *"...there is evidence to suggest that it is pricing above the competitive level. For example, the CAA has commissioned an independent benchmarking study which shows that Stansted's prices are likely to be above the level of comparator airports"* (SMPA, Summary paragraph 13)

[19] The CAA, having considered the benchmarking approach in the lead up to the 2003 price cap, decided not to pursue it because of the numerous complexities and difficulties faced.

[20] Of the dozen independent variables included in the analysis the one most directly related to the competition issue (the 'availability of alternatives') proved insignificant at an early stage of the analysis and subsequently was deleted. There were variables included that had some bearing on market segmentation but service quality for example was specifically excluded (2.4.1).

The difficulty the CAA now faces is that it has taken an exceptionally narrow view of the geographic market in which Stansted operates – substantially too narrow in our view: narrower than the UK, narrow than the SE of England, narrower than London -- and, at the same time, in coming to a view on the competitive level of charges, it has implicitly relied on there being something close to a global airport market – which is substantially too wide in our view. That is, two extreme positions on market definition are held simultaneously, and both are relied upon to reach final conclusions. This simply cannot be right.

But, if we put aside such fundamental matters and take the Leigh Fisher analysis at face value, it does not actually appear to show that Stansted is pricing high on a comparative basis. As noted above, part of the analysis examines comparator airports in terms of their total revenues per passenger, which includes non-aeronautical as well as aeronautical revenues, an approach to be preferred because of the multi-product, two-sided nature of the airport industry. Setting prices for any one product bundle (aeronautical services) the airport firm will take into account the impact this has on revenues from other product bundles (retailing, car parking, advertising etc.).[21] When comparing Stansted in terms of total revenues per passengers the Leigh Fisher study concludes that "...*Stansted is exactly at the level that would be expected for an airport of its characteristics...*"(paragraph 6.2). But, of course, in the light of comments above regarding product differences and the need for comparisons within the same geographic markets, this fortuitous outcome has no bearing on the assessment of competitive price levels.[22]

We note that the CAA's view is that aeronautical revenues are to be preferred over total revenues as the statistics to be compared, but the best that can be said of this is that it shows a dogged persistence in the maintenance of error. Single till effects imply that the levels of aeronautical charges <u>are</u> affected by non-aeronautical revenues, the relative significance of which shows some variation across airports, reflecting variations in the relevant economic circumstances (mix of originating and non-originating passengers, mix of passenger types (business, VFRs, vacation, etc.), income levels in the relevant geographic area, average time spent by passengers at the airport, transport and surface access factors, etc.). Since non-aeronautical revenues affect aeronautical charge levels, to say that the former can be ignored in assessing competitive levels of aeronautical charges is, in effect, to say that material and relevant evidence can be ignored.

[21] In the case of a price controlled airport with a one-till approach, the regulator is required to take into account specified non-aeronautical revenues.

[22] Although if we take the airports included in the Leigh Fisher analysis that are more likely to be in the same geographic market as Stansted, namely Luton, East Midlands and Birmingham (Figure 26), total revenues per passenger at Stansted in 2010 (the last data year) appear to be almost the same as for these three other airports.

Test C: Regulation versus competition

We noted early on that price control in market economies tends to be concentrated in sectors with significant elements of natural monopoly or sectors that are in the early stages of transition away from natural monopoly; and only exceptionally used elsewhere.[23] 'Elsewhere' here includes in relation to policy towards businesses with significant market power, which is normally implemented through the provisions of competition law. Competition law itself is a developing field and it has evolved to cope with new issues and problems connected with market power as economic structures have evolved, often driven by technological change.

Stansted is not a natural monopoly. About the most that the SMPA says is that Stansted might be able to raise prices by 5% to 10% above an undefined competitive level, for an undefined length of time, and, if that is the case, Stansted would have significant market power. The conclusion on pricing – which is speculative/tentative, with lots of 'mays' and 'mights' – there are 320 'mays' and 91 'mights' in the main text of the SMPA – would, if substantiated, establish only the existence of market power, thus putting Stansted in that, quite large, group of businesses for whom competition law is a real constraint on commercial conduct.

To repeat, the vast majority of this group of enterprises are, in economies like the UK, not price controlled; and the reasons for that are well understood. It is a question of beams and motes. There is undoubtedly a consumer detriment if, other things equal, an airport charges £6.30 or £6.60 per passenger for its services rather than £6 per passenger, but the commercial freedoms that come with absence of price control lead to other benefits that must be weighed in the balance. Moreover, price control introduces problems and distortions of its own.

These are most visible in their extreme forms, such as occurred in Central and Eastern Europe in the communist period, but they also exist for less comprehensive forms of control, including in airports. Thus, for example, paragraph 6.43 of the SMPA set out a non-exhaustive list of reasons why a regulator might get the price-setting decision wrong, in one way or another. More significantly, paragraph 6.61 recognises that regulation inevitably distorts incentives and, in particular, dampens incentives for any activity that will lead to significant returns beyond the end of the price review period.

[23] The most significant of the exceptions is the pharmaceutical sector, where there is a unique form of arrangement called the pharmaceutical price regulation scheme (PPRS). In this case there is a dominant public buyer, the NHS, and the development of the PPRS can be viewed as a method of contracting for supplies on the part of the NHS.

At this point in the SMPA, an important and valid statement (about incentives) has been made but it is then simply not followed through. The significance of the 'incentives problem' surrounding price regulation is linked to the significance of innovation as the mainspring of advances in economic welfare; and, in thinking of the implications of regulation, the following points are relevant:

- Over the longer-term, it is innovation and technical progress that are the main drivers of improvements in consumer welfare.

- Innovation is the area where the performance gap between competition and regulation is the widest.

- The SMPA takes what is, at bottom, a static approach to the issues. The 'costs' of competition and the 'benefits' of regulation revolve around the possible 5%-10% price hike, which it is assumed regulation will prevent. There is no substantive engagement with longer-term, more dynamic aspects of competition among airports.

- The SMPA therefore doesn't consider the trade-offs between static and dynamic considerations.

- Innovation encompasses product and service innovation, including improvements in service quality. It is therefore linked to one of the core observations of the effects of price control, which is that it tends to degrade the quality and/or variety of products/services on offer. As a former Chairman of the Competition Commission noted, when the Berlin Wall came down what impressed the easterners most about West Berlin's shops was not low prices but the quality and range of products on offer.

- The importance of innovation incentives is particularly important in the post-divestiture period. Divestiture was motivated in large part by a desire to facilitate competition, and was based on a reasonable expectation that Stansted would begin to be operated in ways different from those of the past. Not only does the SMPA look backwards rather than forwards in its analysis of market definition and competition, in considering Test C it does not seriously engage with the realistic possibility that inappropriate regulation could actually thwart desirable change.

The innovation incentives problem is often recognised by regulators in other sectors, and the most usual response is to develop special schemes and additional arrangements which are intended to restore some of the lost incentives. The CAA could follow this route – although it is not a matter considered in the SMPA, but experience indicates that it leads only to further problems. For example:

- The technical task of fine tuning innovation incentive arrangements quickly becomes extremely complex, and the scope for, and incidence of, errors increases disproportionately, leveraged by the lack of any strong incentives for the staff of regulatory agencies to get things right. Since virtually no-one understands the detail, staff tend to be neither rewarded for doing a good job nor punished for doing a bad job. In effect, the list of reasons for potentially 'getting it wrong' which is set out at paragraph 6.43 of the SMPA tends to balloon in size.

- The discovery of increasing layers of difficulties tends to lead to ever more intrusive regulation. Remembering that airports are not natural monopolies, and that their regulation is exceptional to begin with, this tends to lead regulators like the CAA travelling in the wrong policy direction.[24]

Given the CAA's proposals for Stansted pricing over the next review period, it is perhaps worth emphasising that price monitoring coupled with a threat of restoration of price caps in the future (in the event that the airport operator's conduct is deemed, at some future date, to have been unsatisfactory) does not eliminate the various adverse effects of regulation discussed above.

With price monitoring, there remains a risk that appropriate longer-term returns from innovations and investments will be taken away from the airport operator. The price monitoring commitment lasts only for the review period, but the relevant (threatened) returns (definitionally) lie beyond the end of the period.

Moreover, the approach risks increasing the level of regulatory uncertainty. Unless clear criteria are set out *ex ante*, investment and innovation planning will necessarily have to take account of the uncertainty as to how the regulator will exercise his discretion in five years' time. On the other hand, if criteria for re-regulation are set out *ex ante***,** there is relatively little difference between price monitoring and price control. In our view, given these potentially harmful effects of price monitoring, the better course is not to regulate today, and only to consider regulatory action in the future if it becomes clear that, because of material changes in circumstances, such consideration may be warranted.

Underlying these issues is the fundamental difficulty of price capping a business enterprise that is subject to competitive pressures that are sufficiently strong that it is unable to be completely confident that it will be able to set prices that allow it to make a normal rate of return on its invested capital (i.e. the situation confronting Stansted). The price-cap

[24] This phenomenon can be observed in telecoms, where many activities which were traditionally regulated have been deemed to be open to competition, and put on a transition to full deregulation. Unfortunately, controls retained during the transition have been found to give rise to significant problems and, rather than accelerate liberalization, additional, 'corrective' interventions have occurred. There are now telecoms services that (a) are deregulated in other member states of the EU, and (b) subject in the UK to price controls that are significantly more detailed than those typically applied by Gosplan in the old Soviet Union.

eliminates or limits returns that are above normal, but it does not put any bounds on returns below normal. The effect is to chill investment and innovation, in a way that is usually absent when the regulated entity is a monopolist (and hence more likely to be able to set prices that cover its cost of capital, even in adverse demand and cost conditions).

Finally, we note two further adverse consequences of regulation that are given inadequate attention and weight by the CAA:

- For airports, the defects of price control are extended to non-aeronautical services by virtue of the single till approach. In this way, price or profit control is extended across into economic activities, such as retailing, which would not normally be thought of as obvious candidates for price control. For those innovations and investments in non-aeronautical services that lead to increased net income beyond the price control period, there is therefore the problem that the airport operator can expect to be denied an appropriate level of financial return. That is, regulation chills innovation and investment in non-aeronautical services as well as aeronautical services; and this can even lead to a situation in which regulation leads to price caps above the competitive price. By inhibiting development of net non-aeronautical revenues, airports are allowed to charge higher aeronautical services charges to cover their costs. Part of the uncertainty about the competitive levels of aeronautical service charges is that these levels are intimately bound up with non-aeronautical services revenues, and nowhere in the SMPA is the latter even addressed.

- As a more general point, extensive regulatory intervention in a market tends to increase incentives for unproductive 'rent seeking'. That is, because profitability is influenced by the decisions a regulator can take, for so long as a commercial business believes that it can influence those decisions it will find it commercially rewarding to invest resources and effort in seeking to increase the degree of influence that it can exert. The result is a form of competition among commercial organisations in a highly regulated sector to influence regulatory decisions, leading to a diversion of management effort and attention to dealing with regulators, rather than with customers and suppliers.

It is understandable that a regulator such as the CAA has difficulty in evaluating the comparative merits of price control and price freedom, since it involves an assessment of the regulator's own performance. The original beams and mote point was made in just such a context. That is why it has proved beneficial to give regulators statutory duties in relation to competition and regulation which serve to offset the natural bias to think that regulation can be, and is being, conducted more effectively than is actually the case in reality.

Our bottom line conclusion is that, in its application of Test C and given its statutory duties, the SMPA assessment needs to cover a wider range of issues, in more depth, than is currently the case.