

Sectoral examples of market power, regulation and deregulation and implications for Gatwick Airport

A report to GAL

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Glossary

ATM Air Transport Movement (one take-off and landing)

FSC Full-service carrier

LCC Low-cost carrier

CAA Civil Aviation Authority

DfT Department for Transport

Executive summary

The aim of this paper is to compare competitive conditions in the market where Gatwick airport operates with those that prevailed in other sectors at the time that they were deemed to be sufficiently competitive for price regulation to be withdrawn.

The paper identifies a series of sectors with competitive conditions that are not dissimilar to London's southeast airports', where no ex-ante regulation or light-handed forms of regulation have been adopted. When comparing Gatwick's market with these other sectors there appears to be little justification for the regulation of the former to be any greater than imposed in these other sectors, if any at all.

A first step in the analysis was to consider the arguments put forward by the CAA as possible justifications to regulate an airport such as Gatwick. These arguments are to a great extent an assessment of Gatwick's degree of market power and therefore put relatively little emphasis on an analysis of the extent to which market power would translate into inefficiencies in the functioning of the relevant market. This is indeed an important departure from the analyses that we encounter subsequently in the other ten sectors that this paper discusses.

The ten examples cover a range of sectors and a range of strictness of intervention by competition authorities and/or regulators. The example that most closely relates to Gatwick's situation is the regulatory approach to airports taken by the Australian competition authorities. In addition, we look also at some sectors in the UK – telecoms, retail energy, water and seaports – an international example – New Zealand gas – and some examples of a more general nature – rent controls, computer operating systems, motorway service stations and local bus services.

In relation to Australian airports, it is interesting to note that the authorities accept that Sydney and Melbourne may have sufficient market power to merit policy attention on an on-going basis but they do not consider that heavy-handed regulation is an adequate response. Instead the authorities look one step further to the incentives for airports to increase aeronautical charges above efficient levels and also to the economic costs of an eventual increase in these charges.

They note that airports may not have a great incentive to increase charges (because of the two-sided nature of their revenues) and that there is no efficiency cost unless higher prices result in lower volumes of aeronautical services. Volume effects may be small because aeronautical charges are a very small proportion of the price that passengers pay; airlines have, at least in the short term, a fixed level of capacity so they have no interest in operating the same flights with fewer passengers; and airlines would pass-on charges to passengers in a differentiated way, making them fall most on those segments with the lowest price elasticity. This leads Australian authorities to conclude that the impact of eventual increases in aeronautical charges is likely to be, to a large extent, a transfer from airlines to airports and thus is likely to have at most slight economic efficiency costs. The Australian regulator, as is the case in the UK, has a duty to passengers, not to airlines, and as such does not concern itself with transfers between airports and airlines.

One sector with particular similarities to airports is seaports. As is the case with some airports, users of some seaports would find it costly to switch away operations to other ports. Seaports can therefore give rise to locational rents since they are often also constrained in the extent to which they can expand operations. Nevertheless reliance on an ex-post competition regime for ports in

the UK deregulation is working well, as evidenced in recent studies by the Department for Transport and the Office of Fair Trading.

The sectors considered next highlight a range of different approaches that have been followed by the authorities when dealing with perceived competition weaknesses. In all of these, approaches other than ex-ante heavy-handed regulation have been successfully implemented.

In some cases the authorities had to intervene after deregulation and/or some form of regulation had to be introduced or re-introduced. However, in all cases of post-deregulation intervention, no price regulation was ever adopted. In most cases, the authorities have designed interventions that specifically address the particular impediments to competition identified. In all cases, the authorities avoided the temptation to administratively substitute for the independent functioning of market forces.

The cases that we have studied here thus indicate, in our opinion, that there is significant merit in an approach which identifies inefficiencies and designs interventions that directly address these inefficiencies while interfering as little as possible with market processes. Compared to each of the eleven examples we have studied here, Gatwick's market position is certainly not particularly different and, if anything, Gatwick appears to face greater competitive pressures and to have weaker incentives to charge abusive prices. As such, in comparative terms, it is very difficult to understand why it would be reasonable for Gatwick to be subjected to ongoing ex ante price and service regulation.

1 Introduction

1.1 Background and objectives

The aim of this paper is to compare competitive conditions in the market where Gatwick airport operates with those that prevailed in other sectors at the time that they were deemed to be sufficiently competitive for price regulation to be withdrawn or indeed in sectors that either were never regulated or have been un-regulated for a period of time.

The thesis that we put forward is that there are examples of other sectors with similar conditions of competition to those identified in relation to London's southeast airports and yet these sectors operate under more light-handed and less intrusive forms of regulation or have been fully de-regulated and are subject only to competition law enforcement. When comparing Gatwick's market with these other sectors we see little justification for the strong regulatory intervention that we observe currently.

We recognise that deregulation or absence of regulation has not always worked perfectly. Indeed we have seen instances where de-regulated markets had to be partially re-regulated and also other non-regulated markets where intervention by competition authorities has been required. But the very fact that these alternatives are available post deregulation should give more confidence to regulators considering the case for deregulation. In short, if things go awry, there is a range of instruments that authorities can resort to.

At a more conceptual level many economists would make the argument that the potential economic efficiency loss from over regulation can be greater than that from temporary anticompetitive behaviour. Regulation distorts businesses' incentives both statically and dynamically. In fast moving markets regulated firms may be reluctant or unable to invest and to expand or to introduce new products. Price regulation may subsidise present consumers at the expense of future ones and may even fail to help the consumers or group of consumers that it was intended to protect.

Regulating the prices that a business can charge is an extreme form of intrusion on the business's operation. Such a step should be taken only when it is clear that there will be great efficiency losses in the absence of such intervention. As one of the cases that we discuss in this paper illustrates¹, competition authorities are reluctant to make any directions in relation to prices, in recognition of this point, even where the dominant player has largely undisputed market power. Instead, competition authorities take the route of introducing conditions to enhance competition in the market.

When competition authorities find that an abuse of dominance has taken place, it is very rare for them to impose price controls. Competition authorities deal with problems of abuse of dominance with a varied array of measures designed to facilitate competition and/or to empower consumers.

¹ Microsoft's dominance of different segments of the operating systems market

The main argument that we make here is that in this tool set there is a number of adequate interventions that could be used to deal with the risk of possible abuses of dominance by a de-regulated Gatwick (in the event that Gatwick is indeed found to be dominant in its relevant market, a proposition that is far from certain given the unsettled on-going debate).

1.2 Organisation of the paper

This paper is organised as follows: in the following section we look at what we understand as the motivations for the currently existing regulation of Gatwick. A number of sections follow, each looking at a particular sector where deregulation recently occurred or where no regulation has existed. We look at these sectors in terms of structural factors that make these markets liable to have weak competition and we are particularly interested in cases where some of these match with some of the motivations for regulation of Gatwick discussed in section 2. The sectoral sections are followed by the analysis of comparator cases in order to situate Gatwick within the spectrum of sectors analysed and make some inferences as to the practical validity of the arguments underlying its regulation. This section also includes our concluding remarks.

2 Should airports be regulated?

This section first outlines the economic arguments that underpin the current regulatory regime for airports in the UK. The second part is a brief overview of the CAA's initial view assessment of the market power of Gatwick airport, highlighting key aspects of the competitive situation that can be benchmarked against other regulated and liberalised industries.

2.1 Economic rationale

The primary rationale for economic regulation is the existence of a natural monopoly, i.e., a situation in which no combination of several firms can produce as cheaply as a single supplier. In this case, cost efficiency would be reduced by the presence of multiple firms competing in the market. But a single seller market may be economically inefficient because the seller may have an incentive to restrict supply in order to sell at higher prices. The act of restricting supply in order to raise prices causes a 'deadweight loss' for society as a whole because of foregone units of output that could have been produced at a cost lower than their value to users.

Ex ante regulation is thus generally motivated by preventing this inefficiency and is thus only necessary where there is a natural monopoly with supply restricting incentives. However, regulation is sometimes continued for a transitional period in non-monopolistic markets as competition develops. In transitional periods regulation would be expected to become gradually lighter, tending to ex post rather than ex-ante regulation and often targeted at specific market features. Furthermore, in such a scenario, regulation put in place should be designed to foster and promote competition in the market.

Airports cannot generally be considered to be natural monopolies. As the CAA explains "Unlike natural monopolies, airports do not appear to enjoy economies of scale that mean that a single supplier should meet all demand"². On the contrary, the CAA considers that expanding an airport beyond one runway/one terminal building leads to long-term diseconomies of scale for airports³. That airports are not natural monopolies can be observed by the fact that there are multiple airports/ suppliers that serve demand e.g. in London and the south east, in the north west of England and in Scotland. Competition between airports is different from competition in other sectors for a variety of reasons. Specifically, capital intensity and the long-lived nature of some airport assets (leading to lumpy investment) mean that competition has to be assessed over a sufficiently long time horizon (otherwise *temporary* scarcity of airport capacity can be wrongly viewed as evidence of abusive behaviour). The CAA concludes that airports can compete for airlines and passengers in various dimensions, including prices and service quality (capacity, product differentiation, etc.).

Market power may also arise from network effects. This means situations in which the value of a service to its users increases with the number of existing users. For example, in the case of airports which offer a significant proportion of flight connections, the presence of a large number of other

² Civil Aviation Authority (2008). 'The Government's review of regulation of UK airports The Civil Aviation Authority's response to the call for evidence'. Available at: <http://bit.ly/LiBHos> [accessed 28 June 2012].

³ For an overview of empirical estimates of economies of scale see OECD/ITF (2010), Table 1, p. 22.

airlines is beneficial for each individual airline, as it can offer its passengers a greater choice of flight connections. As such, the presence of network effects also incentivises providers to expand rather than restrict supply, thus reducing the rationale for regulation.

Then there is the issue of location: attractive locations (esp. near large and wealthy population centres such as London and the South East of England) are limited. However, when supply cannot be increased, locational rents do not have an impact on economic efficiency. The level at which these rents are set will have a mostly distributional impact by splitting the value of location between airport operators and their customers (the airlines). Locational rents may impact airport profits but they must be clearly distinguished from an abuse of market power e.g. through the artificial constraining of supply of runway or terminal capacity in order to raise prices. Locational rents can be seen as a facet of service quality and arise naturally in competitive markets where certain locations have an intrinsic value. Owners and users of favoured locational assets often share their respective locational rents. However, it is important to note that the manner in which the locational rent is split between owner and user does not affect the level of economic efficiency of the provision. As such it is unclear what the regulation of locational rents could aim to achieve beyond a purely redistributive outcome. Furthermore, the CAA has no statutory duties in relation to distributional aspects of rents between airport owners and airlines. A particularly skewed distribution of rents would only become a concern for the CAA only if it jeopardised the range of services to passengers by undermining the profitability of some airline services to the extent that these services were not replaced by alternative services that have a greater aggregate economic value.

Overall, the need for regulation in the airport sector is less obvious than in some parts of utility industry supply chains (e.g., electricity and gas transmission), where there are strong theoretical grounds to assume competition would lead to inefficient outcomes. Indeed, there are many airport markets in the UK where airports compete with each other and there is no requirement for regulation, as demonstrated by the Manchester de-designation review in 2007. The CAA notes that the specific circumstances prevailing in the South East of England do not fundamentally alter the assessment of market power: “it is a matter of degree, not a matter of principle, whether airports in the South East hold significant market power or face competitive pressures”⁴.

The following section reviews the CAA’s empirical assessment of the current competitive conditions at Gatwick, which is deemed by the CAA as continuing to require regulation at this stage.

2.2 The CAA’s market power assessment for Gatwick airport

During 2011 the CAA initiated a project to understand the extent and nature of market power held by the airports that are currently “designated” for price control regulation: Heathrow, Gatwick and Stansted. The CAA’s work also addresses the Competition Commission’s view that the economic regulation of Gatwick and Stansted might need to adapt to facilitate competition.⁵ The CAA then

⁴ Civil Aviation Authority (2008). ‘The Government’s review of regulation of UK airports The Civil Aviation Authority’s response to the call for evidence’. Available at: <http://bit.ly/LiBHos> [accessed 28 June 2012].

⁵ Competition Commission BAA Airports Market Investigation – Final Report, March 2009, <http://www.competition-commission.org.uk/our-work/baa-airports/final-report-and-appendicesglossary>.

published their initial views on market power of the three airports in separate papers. Gatwick's analysis was published in February 2012.⁶

The CAA looked at:

- Current market position (in particular, market shares)
- Competitive pressure from competing currently installed capacity (in particular, locational advantages and airline and passenger switching costs)
- Potential competitive pressure from entry or expansion of competing capacity
- Performance and behaviour

We provide a brief overview of the CAA's analysis below⁷.

2.2.1 Market shares

In its assessment of market shares the CAA discusses a number of potentially separate markets and market segments, including at the product (e.g. different types of customers/airlines) and geographic (e.g. passenger catchment area) levels.

Although the market as a whole is relatively concentrated (in most markets considered by the CAA it is restricted to airports in London, the South East and the East of England), there are only a few narrow market segments in which Gatwick's share of business could exceed 40% (passengers from the South East of England, outbound holiday travellers), although the CAA stops short of suggesting that these are relevant economic markets for the purposes of a competition assessment.

2.2.2 Competitive constraints

Customer switching

Airlines

The CAA considers evidence that airlines would switch away from Gatwick in response to a price increase. Different types of switching costs for airlines are discussed (cost of capital investment at new airports, staff relocation and marketing, (net) loss of profits from established routes, loss of economies of scale). In their discussion, the CAA criticise evidence offered on behalf of easyJet for underestimating the degree of switching and overestimating the cost of switching. The CAA concludes that LCCs (which account for over half of the traffic at Gatwick⁸) are more likely to switch to other airports than FSCs, given their "independence from any network and lower capital investment costs" and the fact that they operate some of the most marginal routes at the airport.

⁶ Gatwick - Market Power Assessments, Non-confidential Version, The CAA's Initial Views – February 2012, <http://www.caa.co.uk/docs/5/GatwickMarketPowerAssessment.pdf>

⁷ In summarising the CAA's analysis London Economics is not endorsing the CAA's analysis or the conclusions it has reached. Indeed we note that GAL has separately made a number of submissions to the CAA, prior to and subsequent to the CAA's publication of its Initial Views, arguing that it does not have SMP.

⁸ Civil Aviation Authority (2012). 'Gatwick – market power assessments (non-confidential version): the CAA's initial views – February 2012'. Available at: <http://bit.ly/xRgFQr> [accessed 26 June 2012], p. 27.

However, as the CAA argues that price discrimination between those services typically run by FSCs and other services is possible⁹, even switching by LCCs is unlikely to protect FSCs from the airport's market power. The implication of this is that any market power held by Gatwick would potentially be limited to FSCs.

The CAA's analysis argues that there are capacity constraints at Gatwick, at some times of the day, at some times of the year. It also shows that this situation is shared to a significant extent only by Heathrow, which has the highest market share in most of the relevant markets. The CAA observes that in past instances of airline switching, Gatwick was able to replace the lost routes/carriers without significantly reducing prices. The CAA implies/argues that the ability to fill free capacity with previously unmet demand significantly reduces the competitive pressure faced by the airport. However, as the CAA notes, this conclusion depends on the assumption that current (regulated) prices are not set significantly below the competitive level (which would cause excess demand). In the CAA's view, the evidence that it has reviewed provides no evidence that contradicts this assumption.¹⁰

Passengers

The CAA finds that passengers in London and the South East have a choice between a number of different airports and that many passengers exercise this choice¹¹. That substitution is limited to some extent could be due to actual access restriction (need to cross central London or the river Thames) or differences in airports' image (e.g., Stansted seen as an "LCC airport") or through a lack of differentiation arising from historic common ownership.

According to the CAA, 'third-party choice' by tour operators plays a role in the airport choice of charter operators and appears to work in favour of Gatwick (attractive catchment area for tour operators, good surface access, economies of scale from basing large numbers of aircraft at the same airport).

Looking at the routes available at the different airports, the CAA finds a large overlap for short-haul and domestic flights and a smaller, but still substantial overlap for long-haul flights (3/4 of routes in the former and 40% in the latter category available at Gatwick are also available at Heathrow).

In terms of the sensitivity of passengers to changes in airport charges (to airlines), the CAA argues that a perceptible demand reaction 'might be plausible', but views as too high estimates of a loss of 0.95-1.28 million per year (3%-4% of 31 million passengers per year) in response to a 10% increase in airport charges at Gatwick. Based on the CAA's own calculations, "the required losses in passenger volumes to make an increase unprofitable are 1.5 million (5%) and 2.9 (9%) million

⁹ Ibid., p. 26: "Heathrow introduced different charges for EU services and other international services last year. Gatwick currently only differentiates between domestic, Republic of Ireland (ROI) and other international services – a charging structure that the current owners inherited from BAA."

¹⁰ For example, on some measures (peak charges for an Airbus A320 with 75% load factor) Gatwick has among the highest charges in Europe.

¹¹ A CAA survey showed e.g. that >50% of Stansted passengers had used Gatwick in the past, 24% of Gatwick passengers had used Stansted, etc.

for a 5% and 10% increase in total revenue per passenger respectively. These rise to 1.8 (6%) million and 3.4 (11%) million if the airport experiences a cost saving for each lost passenger”.

2.2.3 Capacity constraints/barriers to entry

The CAA’s analysis of capacity shows that Gatwick has consistently high utilisation rates (70%-80% on average, rising to close to 100% at peak times). Capacity is most severely limited at Heathrow. Utilisation rates at Stansted are much lower (55%), which opens up the possibility of switching, especially for short-haul, point-to-point flights. Regulatory capacity constraints are present in the form of night-flight restrictions and Traffic Distribution Rules. The CAA acknowledges that some scope for capacity increases exists through airlines using aircraft with more capacity. The CAA considers capacity constraints reduce competitive constraints on airports, especially for FSCs. The CAA also states that capacity constraints are expected to increase in the future, which could lead to higher switching costs and increased market power for airports around London.

The CAA argues that the likelihood of entry into the airports market in the UK is very low, due to “very large irreversible investments” that would be required. The CAA sees capacity expansion by incumbents as the most likely source of capacity increase.

2.2.4 Performance/behaviour

With regard to service quality, the CAA finds some evidence which it suggests that the airport was focused on “satisfying the regulator’s targets rather than meeting passengers’ expectations”, but recognises that a number of measures taken by the airport (e.g., improved inter-terminal transit, purchase of new snow-clearing equipment, more efficient security search procedures) “could indeed be consistent with an airport reacting to more competitive pressures.” Parallel increased marketing efforts by Gatwick and Heathrow are also seen as potentially consistent with higher competitive pressures.

Because of price regulation (of aeronautical charges), the CAA concludes that the airport’s financial performance is of limited value in assessing the state of competition in the market.

2.2.5 CAA’s assessment

CAA’s prospective assessment of Gatwick’s market position can be summarised as follows:

- Market shares – passengers: 41 per cent of Gatwick’s passengers come from the Greater London area and Gatwick has a market share of only 25% in this market; the CAA accepts that this is a fairly contestable market. Market shares – airlines: Gatwick has about 14 per cent of all UK flight movements but there can be constraints on the extent to which airlines would be able to switch to alternative airports.
- Airline switching: these are likely to differ significantly across airlines with full service long haul carriers having higher costs than LCCs with their highly flexible and movable business structure. The CAA noted that a number of airlines stressed the higher yields that they earn at Gatwick and how these constrain their switching to alternative airports but postponed a more in-depth analysis of these claims and their implications to the consultation period.

- Passenger switching: passengers have adequate choice among alternatives for short haul routes but much less so for long haul; a significant number do not consider Stansted a particularly close alternative to Gatwick.
- Capacity constraints/ barriers to entry: the CAA observes that there have been consistently high utilisation rates at Gatwick but there remains some limited scope for further traffic increase; Stansted has significant spare capacity.
- Airport performance and behaviour: the CAA accepts that Gatwick has had a step increase in its efforts to compete for passengers and airlines but ventures that this may be a reflection of straightforward profit maximising behaviour by the new owners rather than an indication of stronger competition in the market.

The CAA concludes from their assessment that there is a reasonable prospect that Gatwick will hold overall substantial market power beyond the end of the current price control period. The principal reasons for this are: its locational advantage with a large and wealthy catchment and good transport links; having the largest number of long haul routes (after Heathrow); and the higher airline yields than elsewhere which push up airline switching costs.

On the other hand, the CAA recognises as potential sources of competitive pressure: wide choice available to passengers; LCC and charter carriers have relatively low switching costs; Heathrow tends to be preferred to Gatwick by FSC (but limited to no capacity at Heathrow).

The CAA concludes that they are unable to reach a definitive finding at this juncture and indicate instead a number of issues that need to be assessed further.

It falls outside the scope of this paper to make an in-depth review of the arguments and discussion presented by the CAA in its assessment of Gatwick's market power. However, it is interesting to note that there appear to be really only two arguments progressed by the CAA¹² on the side of an SMP finding: locational advantage and airline switching costs. Furthermore, these two arguments are really only one and they both may be ultimately attributable to price regulation itself. In other words, some airlines may have high switching costs to move away from Gatwick because Gatwick has particular value to their operations due to its location (where location can be interpreted in a broad sense, to encompass the population catchment area as well as transport links and distance to central London). Another aspect of switching costs may be due to high quality of service offered at Gatwick and which is not matched at some alternative airports. In the first case, the switching costs are due to the particular way in which locational rents are currently split between airport and airline; in the second case, it would be unseemly to argue that high quality of service gives rise to market power. As a result we are left only with the perceived 'problem' of locational advantages.

Furthermore, locational advantages can be found in many other market contexts (e.g. prime location for residential property, high street location for retail businesses¹³, and service stations in

¹² The CAA also include the argument of Gatwick being the second most important airport for long haul flights (after Heathrow). However, it is unclear to us how this could be used as an indication of market power since there are no particular forces preventing such services to be offered from other airports (with the exception perhaps of locational considerations in which case we fall back under the first of the other two arguments).

¹³ In the case of some retail chains that have stores at a range of locations, we often find that the prices charged to final consumers are identical at different locations. In this case, the locational rent (which arises because a better located store attracts higher volume



motorways) and they give rise to locational rents which may be split in different ways among owners, sellers and buyers. The question is therefore whether a locational advantage is a valid motive for regulation and indeed whether a locational advantage is the same as or a form of market power.

To have significant market power or to be in a dominant position a firm must be able to “unilaterally decrease output without having to fear that the resulting price rise will be undermined by increased output by competitors or entry”¹⁴ Note that the ability to charge higher prices as a result of a locational advantage does not actually fit within this definition because the seller at a locational advantage does not need to restrict output in order to be able to charge higher prices. And, without a strategic reduction in output, the higher prices do not have any effect on economic efficiency;¹⁵ they are a mere redistribution of rent among market participants.

The following sections provide a discussion of competition strengths and weaknesses in other sectors that have been de-regulated or that have not been regulated. This analysis is then used to compare the state of competition in the different sectors with that in the market (or markets) in which Gatwick operates in order to make an assessment of the case for continued price regulation of Gatwick.

of business and therefore, at the same price level, will sell more) is split between the owner of the location and the operator of the store; consumers are not affected.

¹⁴ E. Elhauge, Defining better monopolization standards, *Stanford Law Review*, vol. 253, November 2003, pp. 253-344

¹⁵ In very simple terms, there is no monopoly ‘deadweight loss’ if the monopolist does not restrict quantity sold and indeed it sells as much as is possible given the existing capacity constraints. This, arguably, corresponds to the current market situation of Gatwick airport.

3 Australian airports

Australian airports used to be subject to price cap regulation in the same way that regulated UK airports are currently. However, a price monitoring regime was introduced in 2002 which replaced the former price capping regime. Two subsequent reviews have validated the new price monitoring regulatory arrangements.¹⁶

There are two regulatory bodies that are important for Australian airports regulation: the Australian Competition and Consumer Commission (ACCC) and the Productivity Commission (PC). The ACCC prepares annual Airport Monitoring Reports for public release. In addition, in 2008, the Government directed the ACCC to formally monitor prices, costs and profits relating to car parking at Australia's five major airports. The reports by the ACCC inform the analysis that the PC subsequently undertakes in the midterm reviews of airport regulation.

In March of this year the PC published their latest review of the regulatory arrangements for pricing airport services.¹⁷ In this section we look at some of the issues that the PC considered and investigate parallels and differences with Gatwick's market context. We focus on Sydney and Melbourne airports as these are the two main airports and therefore more likely to be in a comparable situation to Gatwick's. We note however that these airports face less close competition than Gatwick (there are no other major airports in the same city) so would be likely to have greater market power.

3.1 Sydney and Melbourne airports

The ACCC in its latest annual report expressed concerns about the potential for monopoly pricing at Sydney and Melbourne airports. The ACCC considered that Sydney was a particular concern due to the airport's strong market position and that there was evidence of airlines being dissatisfied with the service they receive as well as increasing prices and profits over time. The ACCC expressed a concern that Sydney Airport might be earning monopoly profits from the services it provides to airlines.

In relation to Melbourne Airport, the ACCC considered that only the operation of its car parking services was potentially of particular concern.

Subsequent to the report from the ACCC the PC conducted a further review into Airport Regulation in 2011, with its final report published in March 2012. The report of the PC into the Economic Regulation of Airport Services found that the current system of regulation should be maintained although it needed ongoing monitoring by the ACCC.

¹⁶ Review of Price Regulation of Airports Services, 2006, Australian productivity Commission, http://www.pc.gov.au/__data/assets/pdf_file/0019/20638/airport-services.pdf. Please see footnote below for the second reference.

¹⁷ Economic Regulation of Airport Services, Inquiry report, 2011, Australian productivity Commission, <http://pc.gov.au/projects/inquiry/airport-regulation/report>.

In spite of all the concerns expressed by the ACCC, the PC did not feel that re-regulation was the route to follow. Rather, it considered that the ACCC has an adequate set of tools to deal with the potential problems it identified.

3.2 Findings by the Australian Productivity Commission

The PC views the principal rationale for government intervention in the market for airport services to be to prevent airports from abusing their market power. Abuse of market power could be reflected in unduly high prices for airport services, or an unduly low quality or range of services offered, inefficiently provided services or wasteful expenditures. Such outcomes would adversely affect airlines, passengers and other industries.

Some recent developments in airport markets, however, are likely to have the effect of reducing airports' degree of market power. Among these global trends, the PC cites the growth in LCC and the greater globalisation of activities by the larger FSC.

Concomitantly, airports' incentive to misuse their aeronautical market power may be to some extent mitigated by its potential effect on non-aeronautical revenues. The PC thus recognises the presence of an element of two-sidedness in the markets where airports operate and its associated rewards to increasing passenger traffic.

In relation to car parks, the PC noted that while there is a locational premium attached to the convenience of parking in close proximity to an airport terminal, the range and extent of modal options observed at each airport seems to provide an adequate competitive constraint on airports' car park pricing, particularly long-term parking.

In relation to the evolution of airport/airline relations since the price monitoring regime was introduced the PC noted positive developments such as: more commercially negotiated contracts have emerged at the regulated airports; differentiated service offerings are being provided e.g. domestic terminal at Sydney; long term pricing and investment agreements are being reached. The report also states that while airlines are not fully happy with the price monitoring regime, none want a return to price-cap regulation.

Nonetheless, the PC finds that the market power of Sydney, Melbourne, Brisbane and Perth Airports is sufficient to warrant on-going policy attention. The ACCC had suggested that the monitoring should be tightened. However, at the end of their analysis, the PC found the current monitoring regulation to be adequate and that the benefits from refining it any further would be unlikely to outweigh the costs.

In assessing the appropriate regulatory response, the PC made a number of important general points on the costs and benefits of airport price regulation:

- The main effect of insufficiently restraining airports' market power is likely to be inefficient increases in prices, resulting in a transfer from airlines to airports.
- However, excessive 'clamping down' on aeronautical prices is likely to detract from economic efficiency and, in particular, diminish investment incentives.
- Price discrimination by airlines ameliorates some of the welfare effects caused by any inefficiently high airport charges.

-
- Furthermore, airport charges are a relatively low proportion of airfares, further reducing the likelihood that increased charges will reduce passenger numbers.

All of these four points apply with equal strength to regulation of Gatwick airport, though in Gatwick's case it is much less clear that market power is present at all.

3.3 Relevance for UK airport regulation

Clearly, most of the arguments that militate against heavy-handed regulation of airports such as Sydney and Melbourne apply with equal if not stronger force to London Gatwick.

In particular:

1. Low cost carriers are an important client group at LGW; these types of carriers transport more cost-conscious travellers and are therefore generally more price-sensitive and better equipped to adapt operations to make most use of airports that offer the best prices
2. Non-aeronautical revenues are a very substantial portion of LGW's revenues and furthermore, LGW has made substantial investments in their non-aeronautical services; this gives LGW's owners a significant incentive to maintain or increase passenger numbers thus making aeronautical charge increases less likely to benefit the airport's bottom-line
3. It is interesting to note that the Australian regulatory authorities do not say that Sydney and Melbourne do not have market power. Rather, they accept that these airports have a sufficient amount of market power to merit policy attention and on-going monitoring. The PC does not, however, consider that heavy-handed regulation is an appropriate response so it would appear to be even less so in an airport such as Gatwick where the case for any degree of market power is considerably weaker
4. In particular the PC considers what the economic costs of an eventual increase in aeronautical charges by airports with market power would be. Given that in the first instance the higher prices would be paid by airlines (rather than final consumers) and given that there is no efficiency cost unless the higher prices result in lower volumes of aeronautical services, the question is whether higher aeronautical charges would have an impact on passenger numbers. The PC sees at least three important reasons why this transmission may fail to occur: first aeronautical charges are a very small proportion of the price that passengers pay; second airlines have, at least in the short term, a fixed level of capacity so they have no interest in flying the same flights with fewer passengers; third airlines are able to use price discrimination to spread the cost increases towards passengers with lower demand elasticity and thus minimise the impact on overall passenger numbers
5. The PC is acutely aware of the costs that heavy handed regulation imposes on businesses. In their 2002 report on price regulation of airport services it is noted regarding Australia's pre 2002 experience with airport regulation: 'At best, a lack of clarity has promoted strategic behaviour by all parties, increased compliance costs and discouraged commercial negotiation. At worst, the arrangements, which combine elements of incentive and cost-based regulation, have discouraged efficient investment by sending poor price signals both to airport operators and users about the costs of providing aeronautical services and by requiring very detailed

regulatory assessment of every investment proposal.¹⁸ The assessment by the CAA has so far fallen short of explicitly accounting for the cost of the various likely distortions introduced in the market as a result of regulatory intervention.

The PC thus concludes that the costs of imposing heavy-handed regulation on these two airports are likely to exceed the benefits. It considers, in particular, that the impact of higher aeronautical charges is likely to be, to a large extent, a transfer from airlines to airports and thus is unlikely to have any significant impact on economic efficiency. In addition, an airport such as Gatwick may have relatively little incentive to increase aeronautical charges because some of its users are quite price sensitive and because, as a multi-sided platform, a business such as Gatwick has a clear interest in maintaining high and, if possible, growing, passenger numbers.

Furthermore, there is one additional significant cost that regulation imposes in the airports market in the South East of England which is not applicable to the case of Sydney and Melbourne: the resulting distortions to competition in a market that has an important potential for healthy competition to develop.

It is therefore very difficult to see why an equally comprehensive analysis of the impacts of regulation in Gatwick's market would lead to a conclusion different from that reached by the Australian PC in relation to Sydney and Melbourne, even if the CAA found that Gatwick had a similar degree of market power as Sydney and Melbourne. In reality Gatwick is likely to have significantly less market power than either those two airports.

¹⁸ Australia Productivity Commission, "Price Regulation of Airport Services; Inquiry Report", Report No. 19, 23 January 2002.

4 UK Ports

Although there is potential for seaports to have market power in some markets, history suggests that they do not generally abuse that market power and that actions by the competition authorities have adequately addressed any abuses that have taken place. There is no ex ante price regulation in place for UK seaports, although there is an element of ex post regulation, in addition to competition law, in the sense that prices need to meet a “reasonableness” test and can be appealed to the Secretary of State on that basis. The small numbers of recent appeals (five appeals over six years) have all been unsuccessful. There are clear parallels between seaports and airports and the success of the ex post approach in addressing any competition concerns in seaports provides a clear potential model for the airport sector.

4.1 Industry characteristics

Ports play an essential role in the UK economy. According to 2010 data cited by the British Ports Association, the UK port industry is the largest in Europe, handling over 500 million tonnes of freight per year. This corresponds to about 95% of the total volume of UK trade and 75% of its value.¹⁹ For an island economy, there are limited alternatives available to the use of sea transport for the movement of freight and bulk commodities. Shipping will therefore likely continue to move the vast majority of freight in and out of the UK. The Government therefore recognises that “the provision of sufficient sea port capacity will remain an essential element in ensuring sustainable growth in the UK economy.”²⁰

UK ports play a similarly vital role in the import and export of energy supplies, including oil, liquefied natural gas and biomass, in the construction and servicing of offshore energy installations and in supporting terminals for oil and gas pipelines. More than 250 million tonnes of oil products and liquefied natural gas moved through UK ports in 2010.

In addition, UK ports were used by 23 million international passengers in 2011.²¹ A particular growth area for ports in recent years has been the cruise liner trade. There are many ports now providing facilities for leisure cruises across the UK, as this tourist market grows.

Another new and growing sector is offshore renewable energy projects such as wind farms and wave hubs. Ports will be key players in both the manufacture and servicing of equipment and in the success of this developing sector with its important implications for the UK’s climate change policy.

Port services

Ports provide supporting infrastructure and services for the berthing of ships. Ports have features of a two-sided market: they provide an infrastructure (‘platform’) where shippers and their vessels transact with port service firms. Each side of this relationship benefits from the presence of the

¹⁹ National Policy Statement for Ports, January 2012, p9.

²⁰ *ibid.*, p10.

²¹ Source: Department for Transport statistics releases, accessed via <http://www.dft.gov.uk/statistics/releases/>

other side: good service provision increases the port's attractiveness to shippers and high volumes of cargo to transport make the port more attractive to port service firms.

There can be varying degrees of vertical integration between port authorities and port service providers. In some cases a port authority will provide all services itself. In other cases, most port services are operated by third party service providers.

The main port services are:²²

- Pilotage – the operations required for a ship to enter and exit a port. This service is most often provided by the port itself.
- Towage – the operation of moving a ship into harbour using tugs. Towage is mostly supplied by third-party port service firms.
- Cargo handling – the movement of cargo to and from ships and across port facilities. This is the most important activity for ships at port, making up to 90 per cent of the total costs of moving goods through port. In the large majority of UK ports this service is provided by both the port itself and competing third parties. This service requires specialist infrastructure such as cranes and handling crews.
- Storage – the provision of facilities for the storage of goods at the port or in the immediate vicinity. As is the case with cargo handling, this service is most often provided in competition by both the port and third parties.
- Ancillary services – includes administration, supplies to ships (fuel, water and food), services to crew members (for example, medical) and general services (such as cleaning and repairs).

Potential competition issues

Factors that could lead to certain ports having substantial market power include: high switching costs for shippers, low demand elasticity, and high barriers to entry and to supply substitution.

An important potential source of market power is low demand substitution possibilities for shippers. Shippers' ability to use an alternative port varies by shipper and by type of cargo. The requirements on port infrastructure are different depending on what is being shipped. For example, for large containers, transport routes are global so locations across the England's South East are all roughly equivalent. In contrast, roll-on /roll-off ferry traffic²³ might be significantly more location and time sensitive and thus have a narrower geographic market.

Opportunities for demand-side substitution will be low within product groups which require significant investment in bespoke infrastructure such as specialised cranes, storage and

²² This list draws on a case study on UK ports by the OFT which contained information about the type of providers of each type of port service: "Infrastructure Ownership and Control Stock-take, Final report: Case study annexes", December 2010, OFT1290b

²³ Roll-on / Roll-off of just ro-ro refers to rolling-stock cargo which does not require cranes to be loaded or off-loaded but is driven on and off the ship's decks.

transportation facilities. In addition demand-side substitution can be restricted as a result of port characteristics that are not easily changed, such as depth of berthing and road and rail connections. Two-thirds of all goods coming into and out of ports do so by road. A port with inadequate local infrastructure links will not be competing in the same market as a port with efficient road and rail connections.

Demand-side substitution may further be restricted due to the existence of long-term contractual agreements with between ports and shippers.

New entry faces a number of barriers and costs but expansion is generally feasible and indeed a number of ports in the UK have recently expanded or are in the process of expanding their capacity and operations.

As for supply-side substitution, the OFT has previously concluded²⁴ that it is relatively easy between a range of dry bulk goods (agricultural products, aggregates, forestry products and vehicles), and to and from roll-on /roll-off traffic, whereas switching to or between bulk liquids (crude oil, oil derivatives, liquefied gas and liquid chemicals) is likely to be particularly difficult, since dedicated storage facilities and infrastructure are required.

Technological progress in the areas of cargo containerisation and vessel capacity, growth in international trade, and the widespread use of IT and logistics, have considerably enlarged the scope for competition in port services, not least by increasing ports' relevant geographic market for container traffic. Goods that travel long distances are nowadays almost always containerised and are carried by increasingly large vessels. This has led to another important development whereby containers make an intermediate stop at a hub port, allowing them to be moved to smaller vessels and distributed to ports which are closer to the final destination of the product.

Technological progress and industry consolidation is also likely to contribute to enhanced bargaining power for the larger shippers and thus some degree of countervailing buyer power in their negotiations with ports.

Overall, due to constraints on both demand substitution and supply substitution some ports are likely to have a degree of market power in relation to some demand segments. There is significant market concentration, with the top 15 ports accounting for almost 80% of the UK's total traffic.²⁵ In a recent case study of UK ports, the OFT recognised the potential for market power in UK ports to lead to market abuses such as high prices (and/or low quality) of the services to users; weakened competition among other port services suppliers; and unfair contracting practices (e.g. taking advantage of specific investments made by users).

There have been very few cases where the OFT has been called upon to investigate the ports sector. On the issue of vertical integration of port ownership and port service provision, the OFT has recently conducted a study of the market for the provision of ferry services.²⁶ The market study concluded that despite the market exhibiting certain features that could prevent, restrict or

²⁴ OFT (2006), 'Acquisition by Montauban of Simon Group PLC', ME/2500/06.

²⁵ National Policy Statement for Ports, January 2012, p10.

²⁶ OFT 2009, 'Isle of Wight Ferry Services: Market study findings and consultation on proposed decision', OFT1096.

distort competition, there was limited evidence of actual consumer detriment. On the evidence gathered, the OFT did not see a case for general changes in the structure of port services – for example through structural separation. Instead, the OFT indicated a preference for taking targeted enforcement action, should there appear to be evidence of anti-competitive foreclosure resulting from abuse of a dominant position.

4.2 Regulatory framework

There is no sector-specific ex ante regulation for UK ports and most major UK ports are privately owned.

The privatisation of UK ports dates back to the sale of state-owned ports and railway ports in the early 1980s.²⁷ The majority of ports in the UK fall into one of three categories of governance: they may be under private ownership, municipal control, or be run by a trust. All three are open to market forces, and are run independently as stand-alone, self-financing enterprises, free from Government support or subsidy.²⁸ The private sector operates 15 of the largest 20 ports by tonnage and around two-thirds of the UK's total port traffic.

In relation to port charges, the Harbours Act 1964 is the main governing legislation. It provides a 'reasonableness' test as to the level and application of certain port charges. The Act provides for interested parties to lodge a written objection in relation to ship, passenger and goods dues imposed by a harbour authority to the Secretary of State.

In practice, appeals against port charges under the Harbours Act have been relatively few. In the past six years decisions were issued on five appeals, all of which were unsuccessful.²⁹ This is interpreted as an indication that competition is working well in the UK ports sector, in the DfT's recent interim review of ports policy: 'The fact that appeals under this provision have been few, and largely limited to small-scale users, provides further reassurance that there is, at present, no large-scale abuse of local monopoly power'.³⁰

In 1989, the government abolished the National Dock Labour Scheme (NDLS). The Scheme, which operated in some 60 ports, legally prevented anyone other than a registered dock worker from performing dock work, and was considered to have resulted in highly excessive manning levels throughout the ports industry.³¹ Since the UK Government abolished the NDLS, normal employment legislation has applied to ports employers and employees, resulting in much greater flexibility for contractual employment relationships. For port users, efficient, reliable and affordable cargo handling is likely to be much more important than the particular form of port

²⁷ Baird, Alfred J. and Vincent F. Valentine (2007), "Port Privatisation in the United Kingdom" in *Devolution, Port Governance and Port Performance*, Research in Transportation Economics, Volume 17, 55–84, Elsevier

²⁸ British Ports Association, <http://www.britishports.org.uk/uk-ports-industry>

²⁹ Portland, Bridlington, Langstone, Bembridge and Brightlingsea

³⁰ See: <http://www.dft.gov.uk/pgr/shippingports/ports/portspolicyreview/portspolicyreviewinterimreport>

³¹ Ross, H. (1995). Ports and innovative ship-owners: Encouraging enterprise. Proceedings of the UK Port Privatisation Conference, Edinburgh, 21 September.

ownership. Thus a number of authors have argued that the abolition of the NDLS was the most important change in UK ports in recent years, more so than privatisation per se.³²

For the last 15–20 years, most of the UK's major ports have been operated as private companies, in relation to which the UK Government takes a very hands-off approach. Port management is entirely at the discretion of port owners. Decisions on investments are made by individual port authorities/port owners and are approved by their board of directors/trustees based on the commercial viability of the proposal. Companies are required to raise capital for port investments, even for major infrastructure such as dredged channels, navigation aids, harbour protection and increasingly local road and rail access improvements.

4.3 Relevance for UK airport regulation

There are numerous structural similarities between ports and airports markets. Both markets deliver services that are important for the UK economy more generally making capacity and the ability to deliver these services efficiently important economic policy considerations. Both sectors deal with the transport of cargo and passengers although maritime shipping is more tilted to cargo transport. Nonetheless, UK ports deal with around 23 million international passengers per year and this is not a negligible figure.

Both sectors have features of two-sided markets where the port or the airport are platforms used by different sides of the market to effect transactions. These platforms also providers services directly to users and we can encounter varying degrees of vertical integration: ports may offer cargo handling in competition with third party service providers in a similar way as airports may offer car parking services in competition with other providers of airport parking substitutes.

Some ports are organised as hubs, receiving very large vessels that unload their cargo to smaller ships covering more local routes. This is similar to the hub-and-spoke organisation of some airports.

There are also important parallels in the factors that may give either ports or airports a position of market power. Geographic location may give ports a substantial market advantage and this is compounded by the effect of good transport and access links. Demand substitution can be constrained by structural characteristics of the port or airport and some of these may be difficult for potential competitors to mimic. Ports also face barriers to entry that are similar to those faced by airports. Expansion, on the other hand, seems to be considerably less cumbersome for ports than for airports and as a result there is evidence of UK ports making significant on-going investments on capacity expansion.

Finally, there are parallels in the ways in which ports with market power might be tempted to abuse it. They would be able to charge high prices, prevent competition with or among service providers to develop, or use unfair contracting practices to take advantage of customer lock-in. Similarly, there are parallels in the reasons why ports may choose not to abuse their market power

³² See, for example: John, M. (1995). Port productivity: A user's view. Proceedings of the UK Port Privatisation Conference, Edinburgh, 21 September; and Ross, H. (1995). Ports and innovative ship-owners: Encouraging enterprise. Proceedings of the UK Port Privatisation Conference, Edinburgh, 21 September.

in any of these ways: two-sided markets benefit from high volumes of transactions and this leads to a desire to expand; in addition, there are likely to be instances of countervailing buyer power.

UK ports thrive, largely un-regulated, to the benefit of their users and the UK economy more generally, under the watchful eye of the UK competition authorities. There are clear parallels between seaports and airports and the success of the ex post approach in addressing any competition concerns in seaports provides a clear potential model for the airport sector.

5 UK telecoms

5.1 Industry characteristics

The telecom sector is a complex industry providing a wide range of services using a huge variety of technologies. Services revolve around the transmission of information (voice or data) using electronic means. Services include point to point voice calls, point to point data transmission, internet access (at various upload and download speeds); and a distinction between these services provided at a fixed location (using either wire or wireless technologies) and these services provided at mobile locations (using wireless technologies). Telecoms and broadcast transmission networks are included within the same EU regulatory framework.

The variety of technologies means that the scope for competition and the extent of scale economies varies considerably. Some elements of the value chain are competitive across many parts of the EU (e.g. many retail services and high volume core networks), whilst others are more rarely competitive, such as the part of the network that connects final customers to the network (sometimes called the last mile, and for copper-based technologies, the local loop).

The presence of competition in some parts of the value chain often relies on regulated wholesale access to the networks of operators with SMP and regulators tend to distinguish between access-based competition and infrastructure-based competition, seeing the latter as providing a more robust long term foundation for competition. Competitive wholesale and retail markets that rely on the SMP operators networks are an example of access-based competition. Competition in the provision of broadband access services between copper-based telecom networks and cable tv networks and networks based on fixed wireless access are an example of infrastructure-based competition.

5.2 Regulatory framework

Economic regulation in the telecom (or electronic communications) sector takes place within the legislative framework set out at the EU level. These are a series of Directives published in 2002,³³ with some subsequent updates.³⁴

The main feature of economic regulation of the sector introduced by these Directives is that in order for the National Regulatory Authority (Ofcom in the UK) to impose economic regulation in the sector they must first define economic markets and then analyse the state of competition in those markets. They may only regulate companies that are assessed as having Significant Market Power (SMP) in a market where competition is deemed not to be effective. Where competition is effective, then any regulatory obligations must be removed. Where competition is not effective

³³ 2002/21/EC Directive on a common regulatory framework for electronic communications networks and services (Framework Directive); 2002/19/EC Directive on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive); 2002/20/EC Directive on the authorisation of electronic communications networks and services (Authorisation Directive); 2002/22/EC Directive on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive); and 2002/58/EC Directive concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications).

³⁴ For example, 2009/140/EC Directive (Revised Framework Directive).

and a company has SMP then the NRA must impose appropriate regulatory obligations on that company.

The approach to defining markets and analysing competition is broadly the same as the approach undertaken under EU competition law and SMP is analogous to the concept of dominance in competition assessments. The two main differences with a competition law approach are that:

- the approach under the telecom regulation is based on a forward-looking analysis of competition, where as in abuse of dominance cases under competition law the analysis will be backward-looking;³⁵
- in order to choose which markets to analyse, the NRA is required to use the ‘three criteria test’ to determine which markets are susceptible to ex ante regulation. All three criteria must be met in order for a market to be deemed susceptible to ex ante regulation. These three criteria are:
 - the market has high and non-transitory entry barriers;
 - the market will not tend towards effective competition over time; and
 - competition law is insufficient to deal with any market failure in the absence of ex ante regulation.

In order to contribute towards consistency in regulation across the EU, the NRAs have to take account of the EC’s list of markets recommended as being susceptible to ex ante regulation.³⁶ NRAs are free to arrive at different conclusions based on their own national market circumstances.

In the UK, Ofcom also has concurrent competition powers under the Competition Act 1998 and the Enterprise Act 2002. This is consistent with the proposals in the Civil Aviation Bill to give the CAA concurrent competition powers.

5.3 Removing regulation and the development of competition

The EC’s first recommendation on markets susceptible to ex ante regulation (2003) identified 18 markets, 7 at the retail level and 11 at the wholesale level, which were thought not to be effectively competitive. In 2007 the number of these markets was reduced to 7, one at the retail level and six at the wholesale level, by the Commission’s second recommendation on markets susceptible to *ex ante* regulation.

This reduction in the number of market susceptible to ex ante regulation is an indicator of the development of competition in telecom markets across the EU. The position in individual member states varies, but there has been a clear pattern of ex ante regulation being removed as competition develops.

In general, retail competition based on wholesale access to existing SMP operators’ networks has developed more rapidly than competition based on investment in the development of competing facilities – hence the lower number of retail markets still judged by the EC to be susceptible to ex

³⁵ Note that under the telecom rules there is no requirement to show an abuse of dominance (or SMP) in order to impose regulatory requirements. The existence of SMP is sufficient.

³⁶ This list is derived using the three criteria test at the EU level.

ante regulation. Nevertheless, infrastructure-based competition does exist. Mobile operators, for example, are only regulated on the monopoly termination element of their operations. This is the case even though generally there are a limited number of mobile operators in a member state e.g. there are four network operators in the UK. Moreover, there exist spectrum capacity constraints which limit the ability of mobile operators to increase the capacity on their network and increase the supply of services. Wholesale broadband providers compete with each other either by using different technologies (e.g. cable, WiMax, satellite) or by using some elements of the regulated fixed operator's network (the local loop) and investing in their own equipment that links to the local loop in order to provide wholesale broadband services to their own retail arms and to the retail arms of other operators.

Under the legislative framework for telecoms, once a market is deemed to be effectively competitive, all economic regulation has to be removed. This is similar to what is contained in the Civil Aviation Bill for the regulation of airports. There is no scope at this point for using more relaxed regulatory controls such as price monitoring or safeguard caps. Nevertheless there are some examples of these types of controls being used in the period before a finding of effective competition e.g. when competition has been introduced but when an operator has been found to have SMP.

The retail price cap on fixed call services in Ireland, for example, was relaxed considerably (effectively introducing a safeguard cap) before it was removed altogether for retail call services.³⁷ In the period 2000 -2003 there was a price cap on a basket of fixed retail telephony services (line rental and calls) in Ireland of CPI-8% plus a number of caps on individual services within in the basket. In early 2003 the regulator removed the caps on individual services and relaxed the overall price cap to CPI-0%. In its reasoning for this decision, ComReg said *"As well as providing continuing protection for consumers, Comreg believes that the relaxation of the cap from CPI-8 to CPI-0 will contribute to enabling competition in price capped services to consolidate and grow, by allowing eircom's competitors more opportunity to compete on price than they would have under a continuing CPI-8% cap"*. This decision was taken under legislation preceding the EU regulatory framework that we describe here. That framework was introduced shortly after this decision and in a subsequent review under the new Framework, a decision was taken to remove the price cap on retail call services as this market no longer met the criteria for ex ante regulation.³⁸ A price control on retail line rental services was retained.³⁹

Relaxation of price controls in the UK

Ofcom undertook a Strategic Review of Telecommunications (SRT) regulation in 2005. Under the Communications Act, Ofcom has a general duty, very similar to that proposed for the CAA in the Civil Aviation Bill, to further the interests of citizens and consumers, where appropriate through the promotion of competition. Moreover, in carrying out its functions, Ofcom has a duty to ensure

³⁷ See ComReg Media Release 3 February 2003: New eircom Retail Price Cap set at CPI -0

http://www.comreg.ie/_fileupload/publications/pres030203.pdf [downloaded 28 June 2012]

³⁸ Whether a market is subject to high and non-transitory entry barriers - See ComReg (2007) Market Analysis – Retail Fixed Calls Market Review, Doc 07/111, http://www.comreg.ie/_fileupload/publications/ComReg07111.pdf [downloaded 28 June 2012]

³⁹ See ComReg Media Release 1 October 2007: ComReg imposes price cap on Eircom line rental charges http://www.comreg.ie/_fileupload/publications/PR011007.pdf [downloaded 28 June 2012]

that regulation does not impose or maintain burdens that have become unnecessary.⁴⁰ The SRT explored the extent to which Ofcom could further this aim, following the principle that Ofcom would “*as soon as competitive conditions allow, withdraw from regulation at other levels*”.⁴¹ In addition to removing regulation where an operator no longer has SMP (as required under legislation), Ofcom concluded that there was scope to deregulate even where SMP was still present. They anticipated that this might, for example, be in downstream markets where all retail operators (including BT) had equivalent access to upstream inputs and where regulatory objectives as set out in the EU regulatory framework (and replicated in s4 of the UK Communications Act 2003) could still be met.

After the SRT, Ofcom relaxed a number of BT retail and wholesale price controls. Some examples are provided below.

Wholesale charge controls in fixed narrowband markets⁴²

- **Inter-tandem conveyance and Inter-tandem transit services.** A “safeguard cap” of RPI-0% was applied for the period 2001 – 2005, and had been in place prior to that in the period 1997 - 2001. The safeguard cap was originally introduced because: “.....it was anticipated that the service would become competitive, and that competition would provide the longer-term constraint on the level of BT’s charges. While BT has not increased its charges by RPI in each charge control year, neither has it decreased its charges. In a fully competitive market, charges would have been driven down to cost. Oftel intends to maintain the safeguard controls to reflect the prospectively competitive nature of these services.” (Oftel, 2000).⁴³ The safeguard cap was subsequently removed in 2005 as BT was found not to have SMP in this market. The legislation requires that controls are removed where there is no SMP.
- **Local tandem conveyance.** A price cap of RPI-13% was applied to this service for the period 2001-2005. This was followed by a “safeguard cap” of RPI-0% for the period 2005-2009.⁴⁴ The safeguard cap was introduced because although BT was judged to have SMP, there were reasonable prospects for competition in this market and prices had converged towards the competitive level. The safeguard cap was introduced for these reasons even though Ofcom recognised that BT had a high market share and that there were relatively limited prospects for a significant decline in that market share. Ofcom felt that a large number of competitors were in a position to compete with BT in the market. The

⁴⁰ Section 6, Communications Act 2003.

⁴¹ Ofcom (2005) Final statements on the Strategic Review of Telecommunications, and undertakings in lieu of a reference under the Enterprise Act 2002, paragraph 5.4. “Other levels” refers to levels in the value chain that are not economic bottlenecks.

⁴² Ofcom (2005) Explanatory Statement and Notification of decisions on BT’s SMP status and charge controls in narrowband wholesale markets. [Downloaded 27 June 2012 from: <http://stakeholders.ofcom.org.uk/consultations/charge/statement/>]

⁴³ Oftel (2000) Price Control Review: A consultative document issued by the Director General of Telecommunications setting out proposals for future retail price and network charge controls, October 2000 [Downloaded 31 August 2012 from: <http://www.ofcom.org.uk/static/archive/oftel/publications/pricing/pcr1000.htm#Chapter 3>]

⁴⁴ Ofcom (2005) Explanatory Statement and Notification of decisions on BT’s SMP status and charge controls in narrowband wholesale markets. [Downloaded 27 June 2012 from: <http://stakeholders.ofcom.org.uk/consultations/charge/statement/>]

safeguard cap was subsequently removed in 2009 with no charge controls applied as BT was judged to no longer have SMP in this market.⁴⁵

Retail charge controls in fixed narrowband markets

- **Business exchange line services.**⁴⁶ Although BT were assessed as having SMP in this market, Ofcom consented in 2007 to the “disapplication” of some of the regulatory controls on BT on the basis that BT’s wholesale offer enabled retail competitors to replicate BT’s retail product. The main regulatory controls no longer applied were the requirement to publish retail prices in advance (for customers with a turnover of greater than £1m) and the ban from bundling products in this market with non-SMP products. Ofcom retained the right to remove the consent to disapply these regulations if they felt that it was no longer possible for competitors to compete on the basis of the available wholesale products (for example, if the wholesale quality of service levels were insufficient).

Retail and wholesale price controls in leased lines (business connectivity) markets

- **Retail high bandwidth leased lines.** Although recognising in their 2003-04 market review that BT had a 40% market share in this market, Ofcom decided that it was inappropriate to impose regulation as they felt that regulation in the upstream wholesale market was sufficient to allow competition to develop in the retail market. They also noted that the threat of action under competition law would be more effective in deterring anti-competitive behaviour than regulation.
- **Retail low bandwidth leased lines.** In the 2003-04 Ofcom market review, BT was assessed as having SMP in this market. In relation to digital lines in this market, Ofcom decided not to impose a cost-orientation condition because they felt that prices would be “constrained over time” due to increasing competition in the market deriving from regulation of related wholesale products. Ofcom did apply a cost-orientation obligation to analogue lines (but did not apply a price control condition) in this market because they did not have the same expectations about the development of competition. In their subsequent market review in 2008-09,⁴⁷ Ofcom did not impose any price control or cost-orientation obligations in any part of this market, but accepted a voluntary undertaking from BT to not increase prices for analogue services in this market above RPI-0% for two years and to agree a further 2 year limit subsequently.⁴⁸
- **Wholesale leased lines in central London.** In their 2008-09 market review, Ofcom removed regulation from a number of different leased line wholesale markets in central London, having defined a separate geographic market for this area, given the different competitive conditions. In this area Colt Telecom had a high market share of 45%,⁴⁹ but

⁴⁵ See http://stakeholders.ofcom.org.uk/binaries/consultations/wnmr_statement_consultation/summary/main.pdf [downloaded 27 June 2012]

⁴⁶ See <http://stakeholders.ofcom.org.uk/consultations/draftconsent/statement/> [downloaded 27 June 2012]

⁴⁷ See <http://stakeholders.ofcom.org.uk/consultations/bcmr08/summary> [downloaded 27 June 2012]

⁴⁸ Ofcom would impose a cost-orientation obligation on prices if BT did not meet its undertaking or if they failed to agree a further voluntary 2 year price limit.

⁴⁹ In the wholesale market for high bandwidth TISBOs above 8Mbit/s up to and including 45Mbit/s in the CELA.

nevertheless Ofcom found that Colt did not have SMP given the existence of infrastructure based competition and the ease with which customers could switch between providers.

5.4 Relevance for UK airport regulation

The telecom sector provides numerous examples across the EU of price controls being removed once markets have been assessed as being competitive. This is a direct consequence of EU legislation. This would also be a requirement in airport regulation under the provisions in the proposed Civil Aviation Bill. For this reason, this case provides a particularly important parallel with airport markets.

In addition, there are further examples of price controls being relaxed (e.g. by introducing relatively loose RPI-O 'safeguard' caps) even where the operator subject to the control is assessed as having SMP. These cases reflect situations where competition has been introduced and, despite existing SMP, the market is viewed as moving towards a competitive position. In many cases this ex ante view was justified in the sense that subsequently price controls were removed altogether as competition did actually develop.

Much of the relaxation of regulation has been in the retail elements of telecom value chains, as a result of greater competitive pressures there. However, deregulation in some wholesale elements of the value chain has also taken place where existing or potential competition is evident. These wholesale elements of the value chain perhaps provide a better parallel for airport regulation than retail markets, though innovative regulatory approaches in the latter, such as safeguard caps, are also instructive.

Ofcom has recognised that competition is a dynamic process that is influenced by the presence of regulation. It has been prepared to withdraw or relax regulatory controls in order to allow competition to develop further, even where a company has had market shares at 40% and higher. It may have been easier to take such an approach in the telecom sector, where technological advances mean that the general trend is of declining unit costs and prices and better services. In airport markets in the South East of England, where capacity constraints can be an issue and where there is less scope for technological advances to address this, reductions in the competitive price level are a much less likely prospect. Whilst it might have been easier in telecoms, this does not undermine the case for relaxing regulation and allowing competition to continue to develop in the airport sector.

In other ways the development of competition in telecom is a more difficult problem for a regulator than the development of competition in airports. One of the key issues for telecoms is equal access to parts of the network that are economic bottlenecks. Equal access is an issue because the bottleneck owner competes in markets that are downstream from the bottleneck and may be able to dominate those markets if its competitors in those markets do not have equal access to the bottleneck facility. Airports do not generally compete in the airline market and so, even if a case could be made that airports were equivalent to an economic bottleneck, equal access to airports is not an issue.⁵⁰ It is also much harder to make the case that airports are an economic bottleneck because of the range of alternative airports available to airlines and

⁵⁰ It has been an issue in some sea ports and bus stations, though one that has been addressed through competition law.

passengers within defined geographic markets, e.g. South East England, Europe etc, and the evidence on switching between them. With a regulatory stance similar to the Ofcom's stance in the telecom sector, it would be difficult to argue that Gatwick Airport should remain in the regulated part of the airport sector, particularly now that joint ownership with Heathrow and Stansted is no longer a factor.

6 UK Retail energy

The Great Britain retail electricity supply market was opened to competition in the late 1990's. All final consumer prices in the retail energy markets are now determined by market forces as all price controls on final consumer prices were lifted by April 2002.⁵¹

At the time of deregulation, the market was highly concentrated but the regulator deemed that the conditions were there for competition to develop and decided to step back from the former interventionist approach.

Ten years later, the market continues to function without price regulation but Ofgem continues to closely monitor the evolution of the retail prices. More recently Ofgem has sought to remedy aspects of the market that it deemed were not working well for consumers. A package of measures was introduced, targeting the specific aspects of the market that may be preventing consumers from being active participants in the market.

6.1 Description of the market

Currently, the retail electricity market is characterised by the existence of six large vertically integrated suppliers⁵², among a total of twelve domestic and twenty two non-domestic electricity suppliers active at the end of 2010.

A recent study by Ofgem⁵³ found no evidence of anti-competitive behaviour and reported that the market is working well in many important respects with the fundamental competitive market structure in place and continuing to advance. However, Ofgem found that competition is not yet fully effective in all sectors of the market – with the result that not all consumers are reaping the full benefits of competition.

Ofgem has subsequently announced a detailed package of remedies.

Measures to promote competition and consumer engagement in the retail energy supply market:

- rules to prevent unjustified price differences - this removed around £500 million of what Ofgem said were unjustified premiums and introduced clearer information on bills and Annual Energy Statements to improve transparency for consumers;

⁵¹ However, there are elements of the final price which are attributable to the regulated aspects of the market, in particular distribution, metering and transmission charges, which as such continue to be price controlled.

⁵² : The Big 6, evolved from the 15 former incumbent electricity and gas suppliers over the 1998-2003 period: (i) Centrica plc: Centrica plc owns British Gas Trading, which operates three retail brands (British Gas in England, Nwy Prydain in Wales and Scottish Gas in Scotland); (ii) E.ON UK: a wholly-owned subsidiary of the German energy group, which operates under the e.on brand; (iii) EDF Energy: a wholly-owned subsidiary of the French energy group - it operates under the EDF Energy brand; (iv) RWE npower: part of the German energy group, RWE Group. The supply business operates under the npower brand; (v) Scottish and Southern Energy (SSE): it maintains and promotes separate and distinct energy retail brands in England, Scotland and Wales; (vi) ScottishPower: a wholly-owned subsidiary of the Spanish energy group, Iberdrola and operates under the ScottishPower brand.

⁵³ The Retail Market Review - Findings and initial proposals,
http://www.ofgem.gov.uk/MARKETS/RETMKTS/RMR/Documents1/RMR_FINAL.pdf

-
- new Standards of Conduct setting out the level of service consumers can expect from energy suppliers, for example on tariff complexity. On this issue, Ofgem warned suppliers in July 2010 that we wanted to see more progress in tackling this problem;
 - tougher rules on sales and marketing⁵⁴

Measures to avoid abuse of dominance:

- Rules governing conduct of supply companies
- Rules setting minimum levels of transparency
- On-going market monitoring

In addition Ofgem took some steps to reduce barriers to entry in the retail sector by improving wholesale electricity market liquidity.⁵⁵

6.2 Relevance for UK airport regulation

In order for the CAA to impose price caps on London Gatwick, it will need to first conclude that the airport has substantial market power in at least some of the markets where it operates.

The UK retail electricity market is an interesting case for our purposes because in spite of an incumbent with substantial market power (SMP) at the time of deregulation, Ofgem decided that ex ante regulation, including price controls, were not an appropriate policy instrument to use and instead it could rely on general competition law to address any anti-competitive behaviour. As in other sectors and other jurisdictions, deregulation has been attempted in spite of the presence of operators with SMP. It has not always worked perfectly but even in the cases where it has worked less well the regulator has been able to deploy regulatory remedies ex-post to deal with the more problematic aspects of deregulation in a way that is tailored to the competition problems identified. The imposition of ex ante regulation, potentially including price controls, was not considered to be a proportionate response.

⁵⁴ in September 2010 Ofgem announced an investigation into npower, Scottish Power, Scottish and Southern and EDF Energy to establish whether the firms were complying with tougher misselling rules, and new rules to allow more people who are in debt to switch supplier.

⁵⁵ Liquidity Proposals for the Great Britain (GB) wholesale electricity market, 22/02/2010, Ref. 22/10, <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=95&refer=Markets/WhlMkts/CompandEff>; The Retail Market Review – Findings and initial proposals, 21/03/2011, Ref. 34/11. See Supplementary Appendix 7: http://www.ofgem.gov.uk/Markets/RetMkts/rmr/Documents1/RMR_Appendices.pdf

7 Scottish Water

7.1 Industry characteristics

The water industry in Scotland provides water and sewerage services to domestic and business customers. Water networks comprise pipes to transfer water under pressure with pumps where necessary. They connect water sources (e.g. reservoirs, rivers and groundwater) with water treatment plants and then with customers. Sewerage networks comprise a pipe network where sewage usually moves under gravity from customers to sewage treatment works and then to final discharge either into rivers or into the sea.

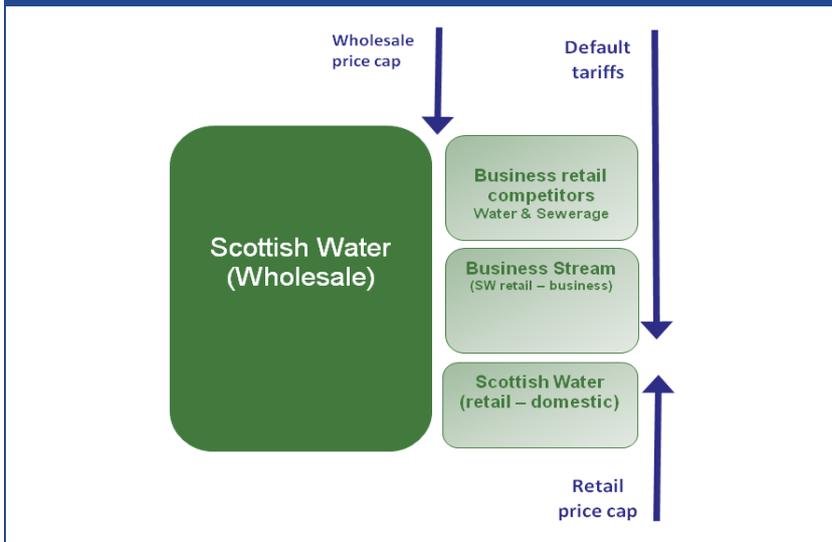
The costs of replicating water or sewerage networks would be high and this does not generally occur. Competition in this sector usually takes place through competition for the market (e.g. long term franchises which bidders compete to provide); or through a regulatory benchmarking approach as practised in England & Wales. Other types of competition are feasible in some parts of the value chain, such as in markets for rights to abstract from and discharge into the environment; and the type of competition provided by self treatment of both water and sewage.

Until recently, all these services in Scotland were provided by one vertically integrated operator, state owned Scottish Water (although large business customers can partially treat their own waste before discharge to the public sewer or wholly treat it before discharge to the environment in order to reduce or avoid the prices charged by the sewerage operator).

7.2 Regulatory framework

Retail competition for business customers was introduced to the Scottish Water industry in April 2008 under the Water Services etc. (Scotland) Act 2005. It is claimed that this is the first example in the world of competition being introduced into the water sector in this way. The sector has one wholesale provider of water and sewerage services, Scottish Water, which provides these services to retail water and sewerage providers who then sell these services to business customers. In 2009-10 there were five retailers operating in the market. Scottish Water's retail arm, Business Stream, also competes in the retail market for business customers and separately, Scottish Water also provides retail services to all domestic customers.

Figure 1: Regulation of the water industry in Scotland



Source: London Economics

The economic regulator, WICS, regulates Scottish Water's wholesale terms and conditions (including price) and also requires that each retail operator offers a default tariff to its business customers. The default retail tariff for business customers requires that each retailer offers a defined set of default services to the same standards and with the same maximum price constraints. This ensures that no business customer is worse off following competition.⁵⁶ Retailers can offer any other service package to their business customers at any price they like.

WICS also regulates Scottish Water's retail tariffs to domestic customers through a price cap.

7.3 Removing regulation and the development of competition

As described above, the regulation of services provided by Scottish Water's retail arm to business customers has been relaxed in light of this element of the value chain having been opened up to competition. The price cap has been replaced by an obligation to provide a default tariff. In addition to the requirement to offer a default tariff, retail operators are free to offer any other service/price combinations that they wish.

7.4 Relevance for UK airport regulation

Airports and water/sewerage are both sectors that have been subject to economic regulation, and so they are similar to that extent. Nevertheless, the characteristics of the water and sewerage industry are quite different to the airport sector, particularly the retail element of the water and sewerage industry – which is the element that has been deregulated. Competition in the market is a relatively new concept in the water sector, unlike airports where airlines and customers have always been able to choose between airports. Whilst this case is instructive in that it provides an example of an innovative approach to relaxing regulatory requirements whilst maintaining some

⁵⁶ This default tariff is subject to a price cap, which is currently equivalent to the price cap on retail prices to domestic customers.

safeguards for customers, the features of the water sector mean that the particular approach taken has been a cautious one relative to other sectors,⁵⁷ such as telecoms, where competition has been a more familiar feature of markets. The airport sector is more likely to be comparable to those markets where competition and choice are familiar.

⁵⁷ We use the term 'cautious' both in the sense that the introduction of competition has been restricted to business customers only and in the sense that the default tariff remains a regulated tariff as before - default tariffs are set at the level Scottish Water would have charged if competition had not been introduced. In other sectors, such as telecom and post, default tariffs/price controls have tended to be set more loosely than this.

8 New Zealand gas

In this case study we have an example of a sector that was fully de-regulated almost 20 years ago but that 10 years later saw the creation of a new sectoral regulator to deal with perceived inadequacies in the behaviour of industry participants.

This may appear to be a case arguing against deregulation but in fact we can interpret the events in the New Zealand gas market as inherent to particular market structures that do require particular attention from either competition authorities or regulators. More importantly, however, is perhaps the recognition that whatever problems markets may have, the solution seems always to be something other than price regulation. Price regulation is a blunt instrument with seemingly little appeal for authorities that actually try to address structural failings in the markets they supervise.

8.1 History of regulation

In New Zealand's gas industry, deregulation occurred in April 1993 and included such changes as the removal of price controls, the corporatisation of council-owned gas undertakings and the abolition of exclusive statutory territorial franchises for gas undertakings. It also included the introduction of competition enhancement measures including information disclosure by pipeline owners, aimed at transparency over rates of return and anti-competitive contracts.

Some aspects of the market appeared to authorities to be uncompetitive and this led to a move to re-regulate about 10 years later. As part of this process the Gas Industry Co (GIC) was introduced in December 2004. GIC's mandate focuses on enhancing consumer outcomes, making improvements to the operation of the retail market, enhancing wholesale market trading arrangements and reviewing infrastructure access and contingency management arrangements.

The GIC can recommend non-regulatory arrangements (including voluntary codes or multilateral contracts) or that rules or regulations be made under the Gas Act 1992, for governance of the gas industry, whichever GIC considers most practicable to achieve the relevant objectives and outcomes.

There followed a process by which industry participants developed several voluntary agreements to provide for non-discriminatory access to transmission and distribution systems. Those agreements include a gas pipeline access code, a transmission information memoranda, reconciliation agreements; and transmission service agreements.

Rules and regulations currently in place include:

- Gas (Information Disclosure) Regulations 1997 - Owners of gas pipelines are required to disclose certain prescribed financial and other information annually.
- Gas (Downstream Reconciliation) Rules 2008 - These rules establish a set of uniform processes to enable the fair, efficient, and reliable allocation and reconciliation of downstream gas quantities. These rules allow for an allocation agent to:
 - Gather information about gas injection and consumption
 - Allocate daily gas quantities to retailers at gas gates
 - Reconcile downstream gas quantities.

-
- Gas (Switching Arrangements) Rules 2008 - These rules enable consumers to efficiently switch between competing retailers. The rules were recommended by the GIC and took effect on 10 February 2011. In particular, a central gas register was set up so consumer information could be exchanged between retailers.

8.2 Relevance for UK airport regulation

Deregulation in the NZ gas market faced a number of obstacles which have little parallel in a market such as Gatwick's. Most of these are connected to the fact that these markets still have incumbents with a very strong market position and often with vertical interests along the supply chain. These markets are also particularly well suited to firm strategies that increase consumer switching costs such as contract complexity and price obfuscation.

Even in such markets that have entrenched competition problems, unlike Gatwick's market, the NZ gas experience illustrates how the appropriate regulatory response is often not to impose ex ante price regulation but to address the competition problems through other means based on an ex post approach, often using competition law powers. Importantly, these interventions have never gone as far as full re-regulation and very rarely have regulators opted for any form of price intervention.

9 Rent controls for residential properties

Because of high desirability of certain urban locations and constraints on capacity to increase supply, observed rents and prices of prime urban property can be substantially above those in other locations.

To prevent ‘excessive rents,’ several countries have in the past introduced rent controls in city centres. These were often part of a wider range of measures designed to protect tenants.

Rent control is thus a form of price cap intervention with an explicit redistributive objective. Not even the proponents of rent control claim that its introduction improves economic efficiency since it is recognised that the supply of the properties in question is fixed. In other words, rent control is not introduced because sellers with market power have an incentive to restrict quantities supplied in order to charge higher prices. Since the supply of premium location property cannot be increased (a main reason why rent control is deemed necessary in the first place), rent control simply implies a transfer from owners to tenants.

It was not immediately appreciated that rent controls and other regulatory interventions in the city centre housing market could cause a number of inefficiencies in both the short and the long term. But, over time, the full extent of the market distortions and inefficiencies that could be traced back to the policy of rent control started to emerge and it is now widely recognised that rent controls are not an adequate intervention to pursue distributive policies.

This chapter presents a brief summary of the many negative effects that price control in rental markets can have and draws some parallels with price controls in airport markets.

9.1 Rational behind rent controls

Rent control has been used in a number of countries at different points in time. It is initially imposed on the argument that the supply of housing in a particular area is “inelastic” i.e. that supply cannot react to a housing shortage no matter how high rents are allowed to rise. Therefore, by forbidding increases in rents, rent control interventions protect tenants from excessive prices without discouraging new construction.

The many and diverse negative implications of rent control for economic efficiency provide a good guide on just how costly administrative price setting mechanisms can be. This section looks at a number of these and discusses their relevance for understanding the effects of price setting interventions in airport markets.

9.2 Rent control causes a number of inefficiencies

In this section we summarise a wide range of arguments that can be made in terms of the market distortions and economic efficiency costs caused by the imposition of rent controls in prime residential locations.⁵⁸

Rent controls discourage investment to increase or maintain the rent-controlled stock; they imply short run benefits to a small group and long term inefficiencies for all

Rent control proponents argue that there are no efficiency losses because a number of exogenous constraints preclude the valued stock of houses from being increased. If there are no efficiency losses then the controls are simply a transfer from one group to another. But there may be investment decisions and other aspects of the supply of housing that may be impacted by rent controls and it is therefore very difficult to rule out resulting supply-side inefficiencies. For example, while it may not be possible to increase the number of housing units, the incentives to offer high quality properties may be seriously dampened. Even the number of units that can be supplied is often not strictly fixed; in the presence of adequate price incentives developers often devise ways of increasing supply. Rent controls in city centres can therefore have a range of negative impacts in the long term, in exchange for a short term benefit for the small group of tenants paying below market rents.

Rent control encourages wasteful use of space

Tenants may hold on to rent controlled properties even when they make only partial use of the property or when they could have otherwise be satisfied with smaller flats. At market rates, we would expect to see a more efficient use of space.

'Solutions' may make the problem worse...

When some of the undesired effects of rent control start to become apparent, authorities (as regulators so often do in their regulated sectors) start thinking of fine tuning the policy to deal with these. This often translates into increasing interference with market mechanisms and further 'unexpected' inefficiencies arising.

⁵⁸ All these arguments have been made in the economic literature before and below we include a (non exhaustive) list of sources:
Alston, Richard M., J. Kearl and M. Vaughn, "Is There a Consensus Among Economists in the 1990s?" *American Economic Review*, 82(2), 1992: 203-209.
Basu, Kaushik and Patrick M. Emerson, "The Economics and Law of Rent Control," *The Economic Journal*, 110(466), 2000: 939-962.
Glaeser, Edward L., "The Social Costs of Rent Control Revisited," National Bureau of Economic Research Working Paper 5441, January 1996.
Glaeser, Edward L. and Erzo F. P. Luttmer, "The Misallocation of Housing Under Rent Control," National Bureau of Economic Research Working Paper 6220, October 1997.
Glaeser, Edward and Erzo F. P. Luttmer, "The Misallocation of Housing Under Rent Control," *American Economic Review*, 93(4), 2003:1027-1046.
Turner, Bengt and Stephen Malpezzi, "A Review of Empirical Evidence on the Costs and Benefits of Rent Control," *Swedish Economic Policy Review*, 10, 2003: 11-56.

An example in city centres is that authorities recognise that not all tenants currently benefiting from rent controls really ‘deserve’ such protection. They may then decide to remove rent controls for “luxury” apartments and keep them on low or middle-grade apartments. But this rewards builders and owners of luxury apartments and disincentivises the builders and owners of the more needed low-rent housing.

Even more dramatically, the authorities may recognise that the low rents that they are enforcing discourage investors from increasing or maintaining the stock and the State becomes a builder and a property manager, at the taxpayers’ expense

Thus, going against market forces can have a range of consequences and dealing with these may require more wide ranging intervention than originally envisaged. Market intervention becomes a cumbersome process that takes up substantial resources.

The more rent controls distort the stronger they are defended

If the rent-controlled price is substantially lower than the respective estimated market value this is used as an argument not to remove the rent control. Such a removal would, it is claimed, impose a dramatic and unreasonable cost on present tenants. So, the more distortionary the rent control is, the harder it is politically to get rid of it.

But when we say that a tenant of a rent controlled apartment would lose consumer surplus if they had to move somewhere else and pay a market rate, this ‘loss’ is a direct result of the price control (in particular of the fact that it is set below market clearing price) not a justification for it.

Rent controls distort prices of competing housing stock

When a set of prices is regulated this may have an impact on equilibrium prices of alternatives and therefore also on the incentives to invest in adjacent markets. In the fringes of the rent controlled area, prices may be higher because the rent control has essentially removed a large chunk of supply from the market.

Negative impact on tax revenues

A further effect is the erosion of tax revenues for the city, as the property-value base for property taxes shrinks.

9.3 Relevance for UK airport regulation

There are a number of parallels in terms of market structure that make rent controls an interesting comparison with price caps in the context of capacity constrained airports:

- Capacity constrains limit operators’ ability to increase amounts supplied in face of growing demand.
- The land where the airport is located is the only piece of land in that area that can be used for the provision of airport services – this makes that land more valuable than the land around it
- Price controls are imposed in an attempt to prevent owners from charging prices above the costs of provision, but this constrains prices from reflecting the full economic value of

the service provided i.e regulated prices are held below the level that would be observed in a competitive market.

The main motivations behind rent control are nonetheless fundamentally different from the arguments for airport price regulation. Rent controls are motivated by the aim to protect a segment of the population that may find increasing housing costs difficult to cope with. This leads to important considerations related to the social diversity of city centres.

These considerations would not seem to apply to airport pricing. Airport pricing is likely to have negligible social ramifications not least because the charges are collected from airlines and therefore only indirectly, and possibly far from fully, from passengers. Also, it is far from clear that an increase in airport charges to the competitive level would translate into an increase in air fares for passengers.

The negative effects that the introduction of rent control can have in city centre housing markets have a number of parallels in airport markets.

Firstly, a price controlled airport which has had its charges capped below the competitive level has a weak incentive to use assets efficiently, to maintain and invest on physical assets, and to offer high levels of service. Intervening against market forces can have a range of consequences and dealing with these may require more wide-ranging intervention than originally envisaged. In regulated airports, authorities often conclude that they need to intervene not only on prices but also in assessing investment plans and imposing measures and levels of customer service. Regulation thus becomes a cumbersome process that takes up substantial resources.

An interesting parallel between arguments made by proponents of rent control and those in favour of airport regulation can be observed when airlines make the argument that Gatwick needs to be regulated because otherwise prices could rise significantly before they increased above the losses that airlines would incur by moving operations elsewhere (the 'yields are higher at Gatwick' argument).

Rent control proponents claim that these simply prevent a rent transfer from users to owners without there being any distortive effects on other aspects of the market such as quality of provision and maintenance of and investment in productive assets. The economics literature unanimously rejects this view. Rather, rent controls are recognised to have a number of distortive effects and furthermore often fail even those that they targeted to protect in the first place.

Finally, if the price controls and other aspects of regulation are defended on the basis that due to capacity constraints they do not impact on incentives to invest, then their aim can only be to transfer economic rent away from airports to airlines. The CAA should therefore make a clear distinction between interventions aimed at improving economic efficiency and those that can have at most redistributive effects between producers.

Furthermore, if an explicit redistributive aim is recognised, the CAA would then have to assess whether the savings that airlines receive as a result are 'passed on' to passengers. The fact that airlines claim to have higher yields at Gatwick than in competing airports and that airlines operate sophisticated price discrimination techniques in their yield management systems indicates that these savings would not in fact be passed on to passengers in their entirety, if at all.

10 Computer operating systems

Microsoft historically has been a strongly dominant supplier of operating systems with market share in the region of 80-90%.⁵⁹ This could have led authorities to impose price regulation in order to protect consumers against Microsoft's power to charge very high prices. Yet, this market is not price regulated. Instead, the market is subject to competition rules and indeed competition authorities have occasionally intervened against infringements by dominant players on an ex-post basis.

The choice of ex-post targeted interventions over ex-ante regulation may be particularly justified in a market such as operating systems. In particular, the authorities seem to recognise (1) the presence of countervailing forces, even when the dominant player has a very large market share, (2) the challenge of setting 'correct prices' for a product so difficult to value and (3) the huge inefficiency costs potentially resulting from getting the price wrong in a market where innovation and links to other markets are so important.

This chapter discusses an example of how competition policy has dealt with an infringement in the market for server operating systems by the dominant player Microsoft. There are two important aspects of the case: the fact that ex-post enforcement is a tool that can be used to directly address the observed anti-competitive behaviour and the fact that competition authorities can go to great lengths to avoid making an intervention directly on prices.

10.1 The server operating systems EC Decision

On 24 March 2004, the Commission issued a decision condemning Microsoft for having unlawfully exploited its near monopoly in the market for server operating systems. The Commission imposed the highest fine ever imposed on a single company up to then: 497 million euro.

According to the Commission, Microsoft had abused its dominant position on the market for server operating systems in two ways. First, by refusing to license certain "interoperability" technology to its competitors so they could develop "work group server" operating systems which would compete directly with Microsoft's server operating systems (commonly called the "interoperability" or "refusal to supply" infringement). The infringement lay in not acceding in September 1998 to a request for technical divulgation from a competitor. Second, by bundling together two products which supposedly ought to have been offered separately, namely the PC operating system and an enhanced media player, Windows Media Player (commonly called the "product integration" or "tying" infringement).

As a remedy for the "tying" infringement, the company was ordered to prepare a special version of the Windows operating system without the functionality referred to as Windows Media Player, and then to launch it in commerce. This task was accomplished without a pricing controversy: the Commission had confirmed that Microsoft could offer the fully functioning version at the same price as the version without Windows Media Player.

⁵⁹

http://www.statowl.com/operating_system_market_share.php?1=1&timeframe=last_6&interval=month&chart_id=4&fltr_br=&fltr_os=&fltr_se=&fltr_cn=&timeframe=last_12

As to the interoperability abuse, Microsoft was obliged to draw up a “complete and accurate specification” of interface technology. This description of the characteristics of how Microsoft’s server operating systems provided certain services to other computers in a network would then be licensed to other companies who would write their own software in accordance with the specification.

Regarding the price that Microsoft would charge software developers for access to the interface specifications, the Decision states:

“To the extent that any of this interface information might be protected by intellectual property in the European Economic Area, Microsoft would be entitled to reasonable remuneration. The disclosure order concerns the interface documentation only, and not the Windows source code, as this is not necessary to achieve the development of interoperable products.”⁶⁰

It is clear from the above that the European Commission did not wish to decide on very specific, very detailed questions of price-setting. The Commission went as far as drawing up a list of pricing principles which described the elements that Microsoft should take into account when setting their prices for access to the interoperability information.

10.2 Relevance for UK airport regulation

The approach followed by the European Commission in this case has the significant advantage of non interference with the detailed price setting decisions of Microsoft but gives the dominant player in question guidance as to what might be considered acceptable pricing if they do not wish to fall foul of the competition authorities again in the near future (and face another lengthy inquiry and another substantial fine).

The authorities see their role as one of giving the market conditions for competition to develop. This means it is more likely that they will intervene in cases of exclusionary abuse rather than cases of exploitative abuse. As we have seen here, this is so even in the case of a market where the incumbent has a much higher degree of market power than Gatwick could ever be argued to have in the Southeast airports market.

⁶⁰ <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/04/382>

11 Other examples: motorway service stations and local bus services

11.1 Motorway service stations

Motorway service stations share some similarities with the UK's Southeast airports market to the extent that there are limits to the development of new competitors operating at a very short distance of existing service stations. This implies that service stations are able to charge prices above the equilibrium levels that would be sustainable otherwise.

This fact is nonetheless generally accepted as a consequence of the locational value of their roadside position rather than a practice that should be subject to regulatory intervention.

There have been competition cases where service stations are investigated on suspicions of price collusion. The possibility of price collusion is always present in markets where there are only a few large players (whether or not there is a fringe of smaller independent sellers as is the case in some countries). This, however, seems to fall squarely under the jurisdiction of competition authorities (rather than regulators) and is therefore adequately dealt with by competition enforcement.

11.2 Bus stations and bus services

Bus stations have some of the characteristics of uniqueness and scarcity that we have seen in other sectors throughout this paper. For example, if London's Victoria coach station could be used by only one coach operator, it would give this operator a significant market advantage. It would be extremely costly or indeed impossible (due for example to planning regulations) for competitors to invest on an adequately substitute coach station.

As a result, 'owners' of important bus stations would be able to charge higher prices without significantly affecting demand. This is yet another example of locational rents.

In a recent investigation of bus services, the UK Competition Commission introduced a straightforward solution to this problem: it required that current bus service operators should grant competitors access to their bus stations.

Although dealing with a structurally very different market, this example also illustrates the power of competition enforcement to deal in a very targeted way with problems identified after a careful assessment of the possible impediments to effective competition in a particular market.

Compared to the many forms in which authorities deal with competition issues in the different markets studied here, price regulation looks like a very blunt instrument indeed.

12 Assessment

12.1 Justifying heavy-handed regulation

Certain forms of market intervention by regulatory authorities, such as administrative price-setting, are so intrusive that their true costs in terms of distorted present and future competition may be difficult to appreciate.

When intervening in this way, regulatory authorities should not only make a very strong case for the need of such extreme intervention but also consider carefully the balance of positive and negative effects against alternatives such as less extreme forms of regulation or ex-post competition enforcement.

In this section we pull together our thoughts about how the different sectors studied in this brief compare as to possible motivations for regulatory intervention. All the sectors selected for this study are examples of markets with structural features that may prevent effective competition from developing. Yet, in all cases except Gatwick, authorities have opted for either light-touch regulation or no regulation at all.

The objective of this section is to benchmark the market conditions faced by Gatwick with those faced by non price regulated operators in other markets. This allows us to evaluate whether Gatwick's market has features so unique that they can reasonably justify the imposition of price and service regulation.

We start by listing sources of weak competition and rating how each of the sectors studied here fare in relation to each of these criteria. We summarise this discussion in table format in the following sub-section and we then reach some conclusions as to the extent to which the imposition of price and service regulation for Gatwick could be justified in light of its market characteristics and of how these compare to those in other markets.

12.1.1 Sources of weak competition

Market power arises where an undertaking does not face sufficiently strong competitive pressure from either current or potential competitors and its customers would incur considerable cost to reduce purchase volumes. Market power can be thought of as the ability profitably to constrain supply in order to sustain prices above competitive levels. Such practices are referred to as exploitative abuse.

An undertaking with market power may also have the ability and incentive to harm the competitive process in other ways, for example by weakening the market position of existing competitors, raising entry barriers or slowing innovation. Such practices are referred to as exclusionary abuse.

In relation to either exploitative or exclusionary abuse, we need to consider both their feasibility and the incentives of the firm in question to abuse their market position in a particular way. In the case of Gatwick, the CAA seems clearly to be more concerned with the possibility of exploitative abuse than with that of exclusionary abuse.

This is apparent from the analysis of Gatwick's market power that the CAA undertakes. The CAA focuses on the search for constraints that would prevent Gatwick from raising prices if it were deregulated. The CAA does not look carefully at whether Gatwick has an incentive to raise prices, it does not balance the costs of intervention against the actual efficiency loss likely to result in the event of higher prices, and it does not consider how best to promote the development of competition in the relevant market.

This may be misguided on the part of the CAA. In most cases of abuse of dominance where competition authorities have intervened, the concern is with some form of exclusionary abuse. It is very rarely the case that competition authorities decide to make rulings in relation to the level of prices that individual undertakings charge. One of the reasons for this is that conceptually, competition authorities believe that prices should be set by the market; the role of competition authorities should be limited to eliminating market features or behaviours that harm or weaken the competitive process.

To answer the narrow question of whether Gatwick would lose enough sales to deter it from a price increase above the competitive level we could list the sources of related competitive constraints in the following way:

- Existing competitors and customer switching - 'Existing competitors' are undertakings already in the relevant market. If an undertaking (or group of undertakings) attempts to sustain prices above competitive levels, this might not be profitable because customers would switch their purchases to existing competitors. The market shares of competitors in the relevant market are one measure of the competitive constraint from existing competitors. It can also be important to consider how the market shares of undertakings in the market have moved over time.
- Potential competition - This refers to the scope for new entry. Where entry barriers are low, it might not be profitable for one or more undertakings in a market to sustain prices above competitive levels because this would attract new entry which would then drive the price down – if not immediately, then in the long term.
- Buyer power - Buyer power exists where buyers have a strong negotiating position with their suppliers, which weakens the potential market power of a seller. This may occur in relation to buyers that represent a large share of demand or groups of buyers that can switch away from their current supplier at very low cost.
- Counterbalancing effects/ Incentives to maximise sales – Depending on the likely reaction of consumers/users and competitors to price changes, sellers may have more or less incentive to increase prices. Dynamic effects may imply that the seller faces significant costs from raising current prices – for example in the form of foregone future market share in a rapidly expanding market.

In the next few paragraphs we compare Gatwick with the other sectors considered in this study in terms of how they fare against these four sources of competitive constraints.

Competitive pressure from existing competitors

For competitive pressure from within the market we need active competitors with capacity to supply a reasonably similar product/service. For most of the markets we looked at there were a

sufficient number of alternative suppliers. According to the CAA this is only true to a moderate extent for airports such as Gatwick because alternative suppliers have capacity constraints or can offer a reasonably substitute product only to limited segments of current customers.

If switching costs are high, the incumbent has a more secure market position even in the presence of sufficient numbers of alternative suppliers. This is a difficult indicator to assess precisely however. We looked here at costs that users would incur to switch to a next best alternative without considering differences in prices. If we had considered differences in prices the results would have been impacted by whether or not incumbent prices are regulated (and set considerably below their competitive equilibrium level).

Switching costs may be high for structural reasons or as result of strategies adopted by the incumbent. This distinction may be an important one because it implies different ways in which policy can act to reduce switching costs. For example in utilities and telecoms there have been criticisms of commercial practices designed to raise consumers switching costs. Competitors in these markets resort to very complex tariff structures making information about prices difficult for consumers to understand and thus making consumers reluctant to search and switch to alternative suppliers. This problem has been recognised by a number of regulators and competition authorities.

When demand is ultimately driven by buyers for whom the cost of what the incumbent sells is only a small part of the related total expenditure, it will have low sensitivity to increases in price and this encourages sellers to raise prices. Demand that has intrinsically low elasticity (as is arguably the case for utilities) equally encourages sellers to raise prices.

The value of the product/service that the incumbent has to offer may be a function of the location and therefore valuable locations command high premia. Locational rents allow sellers to increase prices significantly above costs with no impact on demand.

It may be the case that the incumbent has a market advantage due to the very particular characteristics of their products/services and these may be the reason why users have a very strong preference for the incumbent's product. This is a market advantage that is different in nature from those gained through uncompetitive behaviour. In the case of Microsoft operating systems it is the characteristics of product itself that are difficult to replicate because of how this system interfaces with other software.

Competitive pressure from competitor expansion or threat of entry

Barriers to entry protect incumbents against competition from outside the relevant market. There are significant barriers to entry in most of the markets we look at in this study. These barriers may arise due to planning regulations, non availability of necessary assets, or because of strong network effects in operating systems.

Small competitors or potential entrants will have considerably higher unit costs than the incumbent in markets where economies of scale are important. We don't see this as a particular strong factor in any of the markets considered except for operating systems. This is not to say that there are no economies of scale in the other markets, but simply that they do not seem to cause a very strong competitive disadvantage to smaller players.

A natural monopoly occurs in a market where decreasing unit costs (economies of scale) persist to very high levels of output such that the most efficient form of supply in the market is to have only one producer. Again only possibly operating systems, of the markets studied here, meet this criterion.

An entrant or an expanding competitor may find that the inputs they require to supply the market are difficult to access. This is likely to be the case in airports in the case of entry, but much less so in the case of expansion. It can also be the case in utilities if retailers need to contract with vertically integrated competitors that may have an incentive to make access to inputs difficult and/or costly. In utilities and in telecoms such access conditions are often subject to regulation. Experience has shown this type of regulation to be reasonably successful.

Dominant undertakings may be constrained by buyer power

Low buyer power can occur when a market has many small buyers who would not easily be able to co-ordinate their actions.

The ability to price discriminate allows a seller to overcome some of the constraining effects of having a few large buyers. While the large buyers may be able to negotiate favourable commercial terms, the seller may increase prices to those who have a weaker bargaining position. More generally the ability to price discriminate enhances market power.

Counterbalancing effects

In two sided markets sellers have an additional cost when raising price to one side of the market in that they lose sales in associated markets. This is true for platform markets such as airports. Operating systems also benefit from greater number of users (encouraging developers to develop software that is compatible with that system thus further enhancing the value of the operating system to users) but these are mostly 'network effects' because the operating system does not make revenues directly from software developers.

Network effects occur when consumers' valuation for what they buy increases as more people buy. This gives sellers an incentive to keep prices low.

A seller may benefit from lower prices and higher sales in a given market when that enhances their market position in related markets. Busier airports benefit from a range of expenses that users will make; operating systems sales help Microsoft brand image in other products; motorway service stations can by attracting more stoppers improve sales of a range of offerings.

In some markets there are many added benefits from increasing sales and increasing market share. This may be because the company can sell more in related markets that may be more profitable, because even at low prices profit margins are very high, or because the company is building demand for the future.

One of the costs of weak competition is dampened incentives to innovate. When a market even if not very competitive is observed to have very fast innovation, it should present less of a concern for competition authorities. Most economists would agree that the economic efficiency loss from low innovation is much larger than that which results from high prices alone. Operating systems and telecoms are generally regarded as highly innovative markets. In airports there is less scope

for innovation or dramatic product changes yet the new London Gatwick owners have made important improvements in the range and quality of products that LGW offers. There is no evidence to suggest that this will not continue. It is also reasonable to expect that new owners of Stansted will seek out innovative solutions, further stimulating airport competition.

Summary

The table overleaf summarises this discussion while looking specifically at whether the arguments that the CAA puts forward to justify regulating Gatwick can be made equally, more or less strongly in relation to the other sectors of the study.

In a number of cases we find that the sectors studied have seemingly lower barriers to entry than Gatwick's market. Low barriers to entry are an important, often sufficient, argument not to regulate. However, the converse, i.e. that a market does not have low barriers to entry, is not a sufficient argument to regulate. Furthermore, Gatwick already faces competition from nearby airports (even if entry of new airports is unlikely to occur in the near future. Moreover, barriers to expansion are much more limited, as demonstrated by the expansion plans of Gatwick and Luton airports within their current runway and terminal configurations, as well as the Davies Commission and the "race for runways" that is currently underway.

It is interesting to note that, for a number of sectors, there appear to be stronger arguments to regulate than can be made with respect to Gatwick. And, yet, none of the sectors in the table is faced with anywhere near as intrusive a form of regulation as Gatwick currently is and which the CAA appears to be considering extending beyond the current price control period.

Table 1: Comparison of Gatwick with de-regulated/non-regulated sectors

	Strength of possible arguments to regulate by comparison to Gatwick			Regulatory status
	stronger	similar	weaker	
Sydney and Melbourne airports	no competing airports in the same city	identical business		no price regulation; authorities monitor quality of service indicators and undertake regular reviews of the sector
main UK seaports	no competing ports in the same location	similar business model		fully de-regulated
telecoms	development of competition In some markets more complex due to issues of access to bottleneck services		lower barriers to entry in some areas of both retail and wholesale	full de-regulation except for access conditions to 'essential facilities'
utilities retail - water, gas, electricity	retail operators often have SMP at time of de-regulation		lower barriers to entry	ex-post general competition rules; in cases where de-regulation worked less well regulators used approaches tailored to the problems identified; ex ante regulation, particularly price controls, was not considered a proportionate response.
Scottish water	water is a sector with no tradition of operating in a competitive market - this is in stark contrast to airports			cautious approach to de-regulation: introduction of competition has been restricted to business customers; the default tariff remains a regulated tariff as before - default tariffs are set at the level Scottish Water would have charged if competition had not been introduced.
premium location residential property	housing costs can be an important proportion of household budgets	locational rents; constraints against increasing supply		rent control not considered an adequate tool with which to undertake social and urban space re-engineering
computer operating systems	unchallenged monopoly with much greater market shares than Gatwick	dynamic benefits from higher sale volumes		no regulation; no interventions relating to price levels; authorities intervene only to curtail exclusionary abuses
bus/coach stations/services and motorway service stations		locational value of certain assets	lower barriers to entry	competition authorities intervene when necessary in very tailored form after careful observation of market features that contribute to weak competition

12.2 Concluding remarks

This paper looked at a range of sectors where different arguments in favour of regulatory intervention could be made given existing factors that may be considered to prevent effective competition.

When we compare the strength of these arguments with the comparable arguments that can be made in relation to London Gatwick we find only slight differences and therefore cannot identify any salient factors that would justify a regulatory treatment of Gatwick very different from that which has been deemed adequate elsewhere i.e. full deregulation or much lighter forms of regulation than are currently applied at Gatwick.

Yet, of all these sectors, only Gatwick is presently subject to a particularly heavy-handed form of regulation.

In all the other markets analysed in this study, approaches other than heavy-handed regulation have been successfully implemented. Interventions range from purely ex-post monitoring to more interventionist remedies, and problems that have required intervention have been identified at the time of deregulation or, occasionally, sometime later.

As such, it is accepted that unregulated or de-regulated markets have occasionally had competition problems. In some cases the authorities had to intervene after deregulation and/or some form of regulation had to be introduced or re-introduced. What is important to note, though, is that these post-deregulation interventions have been designed specifically to address the particular impediments to competition identified rather than as an attempt to administratively substitute for the independent functioning of market forces.

Of particular note is, clearly, the fact that authorities of all guises have shied away from interfering with the price-setting process. The cases that we have studied here indicate that there is significant merit in an approach which identifies inefficiencies and designs interventions that directly address these inefficiencies while interfering as little as possible with market processes.