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REPORT

Issues Regarding Regulation of New Zealand's Gateway Airports

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Air New Zealand

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4 December 2014

Contents

Summary

There are a number of possible approaches to constraining the exercise of market power when airports set their charges. These include regulating airport charges, including:

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- Light-handed forms of regulation or price constraint
    - Trigger regulation or price monitoring
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    - Price constraint by use of long term contracts between airports and their users
    - Regulation by Orders-in-Council from the Governor General
    - Price constraint by arbitration.

The International Civil Aviation Organization, Airports Council International and the International Air Transport Association have principles on which airport charges should be based, but do not make recommendations on the form regulation should take.

A review of approaches taken by individual jurisdictions shows that price cap regulation has been used in a number of jurisdictions, although there is some use of light handed formats. The growth of price cap regulation is associated with the initial wave of privatisation or commercialisation of airports in many parts of the world.

Recently, some jurisdictions have moved away from price cap regulation to light handed regulation, specifically Australia, and (for some airports) the U.K. In the case of the U.K. and Australia, one reason was the growing complexity and cost of price cap regulation; although in the U.K. another factor was recognition of competition between some airports. The U.K. now only uses price cap regulation for London Heathrow and London Gatwick airports. For other U.K. airports the threat of regulation is credible as the legislation to enable regulation continues to exist and can be exercised by the U.K. CAA.

There is a considerable mix of single and dual till formats, when assessing airport charges. The U.K. uses single till while Australia has used dual till.

Each form of regulation has its strengths and weaknesses when looked at from the perspective of technical efficiency, allocative efficiency, dynamic efficiency, investment, the Averch-Johnson effect (overinvestment), gold-plating, risk transfer, the ability to price discriminate, cost of regulation (to government and the regulated firm), ability to respond to market changes and the amount Of information required to make the process work.

Heavy-handed approaches do well on allocative efficiency, but are very time-consuming and expensive and tend to discourage innovation (technical efficiency). Price cap regulation addresses some of the short-comings of heavy-handed approaches, but remains time consuming and expensive. The light-handed approaches have potential for high achievement from some perspectives, but uncertain results from other perspectives.

Of the light-handed approaches, two have the potential to curb airport exercise of market power in the New Zealand context: information disclosure and arbitration.

Information disclosure is most likely to be effective at non-gateway airports, where airlines may have some countervail powers by being able to reduce or withdraw air service. However, it is likely to be less effective at gateway airports, where the threat of carrier reduction or withdrawal of service is likely much less as the greater scope of airline competition is likely to result in replacement of withdrawn service.

As well, New Zealand's geography results in less competition between gateway airports than is the case in a number of overseas markets. Finally, the major carrier(s) face significant entry barriers (foreign ownership limits) to establishing air services at other airports as a supply response to unduly high airport charges.

Thus information disclosure is useful but unlikely to be able to constrain potential abuse of market power at New Zealand's gateway airports. Airport operators complying with information disclosure requirements, still have an ability to ultimately and unilaterally impose price increases. The power of information disclosure as a light handed constraint on airport market power depends on the credibility of the threat of imposing regulation. Australia has a credible threat of reregulating its airports as it previously regulated these operators and continues to have legislation and regulations in place to quickly re-establish regulation. This is not the case for New Zealand.

Thus, New Zealand needs an additional constraint on the potential exercise of pricing market power by its gateway airports.

A regime with both information disclosure and Final Offer Arbitration is a recommended remedy for New Zealand's gateway airports.

a. It is a light handed remedy.

b. It can be designed to be a process that is time (and hence cost) limited.

c. While it has much lower costs for carriers and airports than heavy handed or price cap regulation, it will have some costs and this will discourage airlines from making FOA the "default option" for carrier-airport negotiations on rates and charges.

The use of Final Offer Arbitration in Canada's rail system, and in telecommunications and utilities in various jurisdictions has proven effective is fostering a more competitive environment.

For New Zealand's gateway airports, a regulatory design whereby one or all of them can be designated for use of the arbitration regime may increase the effectiveness of the existing information disclosure regime.

1 Introduction

1.1 Legislative Context

New Zealand's *Airport Authorities Act 1966* (the Act) gives airport authorities the power to set charges as they see fit. It does, however, require airport authorities to consult with every "substantial customer" (defined as anyone having paid an amount to the airport of at least 5% of airport revenues) when fixing or amending charges. Even if charges are not fixed or amended for an extended period, consultations have to take place at least once every five years. Consultation is also required for any planned capital expenditures where the investment amount would exceed 20% of the value of the existing assets.[1] The Act also has provisions for regulations governing disclosure of financial information, and the form that disclosure takes.

The *Airport Authorities (Airport Companies Information Disclosure) Regulations 1999* provided additional direction on what information has to be disclosed and when. Information to be disclosed covers only identified airport activities, which include airfield, aircraft and freight, and specified passenger terminal activities.

Amendments to the Act in 2008 included a revised information disclosure regime, added a more prescriptive input methodology, and transferred the regulatory authority from the Ministry of Transport to the Commerce Commission. With the 2008 amendments, the airports of Auckland, Wellington and Christchurch are now also subject to the Commerce Act, 1986.[2] This Act preserved the requirement for information disclosure, provided for a transition period, and mandated a review of the new regime as soon as any new price was set.

As part of the information disclosure regime, the Commerce Commission was required to report to the Ministers of Commerce and Transport as to how effectively the regulation was promoting the purpose of the relevant part of the Commerce Act in relation to each airport. The findings in the reports support the view that information disclosure is a useful but incomplete regulatory tool. For example:

- in respect of Wellington Airport, the Commission found that information disclosure had not limited excessive profits;
- in respect of Christchurch Airport, the Commission found that information disclosure had not been effective in limiting expected excessive profits, nor was it effective in promoting pricing efficiency.

While both airports reassessed these charges in response to the Commission's reports, these reports were one-off following the initial setting of prices under the new Part 4 regime, and will not be repeated following future price setting.

The objective of information disclosure under the Commerce Act was that transparency, coupled with credible sanctions, would incentivise airports to act less like a monopoly and more like a firm that does not abuse pricing power. However, unlike the Australian regime (discussed further below), the lack of an

[1] Assets refer to those related to airfield activities, aircraft and freight activities and specified passenger terminal activities.

[2] Auckland and Wellington are partially privatised while Christchurch is fully government-owned. All three airports are operated on a commercial basis.

ability to amend the coverage and scope of regulation other than by Order in Council means that there is no effective sanctions on airports, which has limited the effectiveness of information disclosure.

1.2 The 2014 White Paper and Questions to be Addressed

In August 2014 the Ministry issued a white paper on the "Effectiveness of Information Disclosure Regulation for Major International Airports." The paper raises a number of issues to be addressed, including innovation & investment, efficiency, quality of services, sharing of gains, excessive profits.

InterVISTAS Consulting has been asked by Air New Zealand to comment on certain provisions and potential changes regarding the regulatory control provisions governing airports in the Civil Aviation Act, 1990, and the *Airport Authorities Act, 1966*. Specifically, I have been asked to review the effectiveness of the current information disclosure regulations for major international airports, both in New Zealand as well as in other jurisdictions. I have been further asked to comment on potential alternatives to the current light handed regulatory approach in New Zealand.

1.3 Outline of this Report

To address these questions this report is structured as follows.

We begin by describing what the major international aviation organisations have said about regulation of airports, and follow this with a description of how a number of jurisdictions around the world have regulated (or not regulated – e.g., Canada) their airports.

- Chapter 2 provides a very brief listing of different types of regulation that might be considered for airports.
- Chapter 3 covers the positions of ICAO, ACI and IATA
- Chapter 4 utilises the recently completed ACI manual on airport regulation,[3] which describes airport regulation in various jurisdictions around the world, including Europe, the Americas, Australia and Asia.
- Chapter 5 discusses information disclosure as a regulatory constraint mechanism and provides context for New Zealand based on the experience of regulators in other jurisdictions. The chapter also address the issue of Final Offer Arbitration (FOA) as a potential remedy to the potential exercise of gateway airport market power.
- Chapter 6 provides a set of summarized findings and recommendations for Air New Zealand.
- Appendix A provides more detail regarding the existing regulatory regimes discussed in Chapter 4.

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[3] The ACI Guide to Airport Regulation, Airports Council International – World, September 2013.

2 Alternative Methods of Constraining the Pricing Power of Airports

2.1 Introduction

Infrastructure companies which have market power may need to have their pricing practices constrained so that their actions do not undermine prosperity in other sectors of the economy. While the establishment of a regulator with authority to regulate prices is the traditional method of constraining pricing abuse of market power, there are other less cumbersome, cost effective and more transparent methods which can have the same effect. This chapter briefly describes different forms of regulation or other constraints on pricing behaviour by firms with market power. The heavy handed and price cap regulation formats are dealt with only briefly, with more attention on light handed regulatory formats.

2.2 Heavy Handed Regulation

Heavy handed regulation is a term that is applied to "traditional" regulatory methods, originally developed in the railway and utilities sectors. Each of these are covered only briefly here. Additional information can be found in the 2007 Report of Dr. Michael W. Tretheway,[4] or in the ACI Guide to Airport Regulation.[5]

- Rate-based rate of return
  Rate-base rate of return is a regulation model which allows a company to earn revenue in an amount sufficient to cover its costs and provide a reasonable rate of return on capital investment. Under this regulation system, a firm operates on full cost-recovery basis and can retain any surplus revenue in the form of a profit. This format is often referred to as heavy handed as typically the regulator must approve each of the prices (or change to prices) charged by the firm for different services and to different users. The format is often criticised as being lengthy, expensive (for the regulated firm and for the regulator) and subject to substantial dispute on a number of key issues, such as the permissible rate of return. For the regulated firm, there is low risk of financial sub performance as the process almost guarantees that costs will be covered. The format is criticised for reducing incentives to achieve efficiency.

- Cost-of-service regulation
  Cost of service regulation is quite similar conceptually to rate-base rate of return regulation. Instead of setting the rate of return based on invested capital, however, it sets rates based on the cost of providing the service. While the rate-base rate of return approach places emphasis on determining the rate base (the capital base) in order to establish a reasonable rate of return, cost of service regulation does not place much focus on determining the capital base in practice. In both cases, there is an allowance for a fair or reasonable rate of return on invested capital. Cost

[4] "Report of Dr. Michael W. Tretheway on the issue of potential changes to the regulatory control provisions under the Commerce Act, 1986, 6 July 2007. This statement was developed at the request of Air New Zealand.

[5] ACI Guide to Airport Regulation, Airports Council International – World, September 2013. Note that this Guide was developed by InterVISTAS Consulting Inc. for ACI-World. The recommendations in the report are those of ACI.

of service regulation was the traditional approach used for air carriers prior to deregulation and the introduction of substantial meaningful competition. In practice, cost of service regulation often focuses not on the level of charges, but rather on allowed percentage increases in charges. One problem with this approach is that it tends to ignore productivity gains which can offset the need to raise prices when costs increase. Cost of service regulation has the advantage of being somewhat simpler to implement than rate-based rate of return regulation, and thus may have less regulatory delay and lower costs to administer. Nevertheless, there are still shortcomings to this approach. Like rate of return regulation, this approach provides no incentive for the regulated entity to reduce costs. Moreover, it also effectively transfers almost all the risk to the users, as any additional costs that result from an external economic shock or changing market conditions will be passed in full to the consumer by the regulated entity. Like rate of return regulation, cost of service regulation is an intrusive approach, requiring the regulator to approve every price change and, in some cases, approve service decisions.

2.3 Price cap regulation

Price cap regulation was originally considered to be light handed regulation, at least relative to rate base rate of return and cost based regulation formats. But as implemented in a number of jurisdictions, such as for UK airports, the price cap review price has become burdensome and lengthy. We classify it as neither heavy handed or light handed.

Price cap regulation was designed to reduce or eliminate the undesirable aspects of the intrusive rate of return and cost of service forms of regulation.[6] The original intent of price cap regulation was to substantially reduce or eliminate regulatory delay by giving the firm some authority to change its prices without a hearing before the regulator, and to create incentives for the firm to improve productivity. Nevertheless the periodic reviews can require significant time and expense, as reflected in the major reviews of airport price caps in the UK, and in Australia (prior to 2002). In effect, price cap regulation requires that prices covered by regulation must increase at a rate more or less than that of inflation. The difference between inflation and the allowed rate increase is the productivity factor, often referred to as "X" factor. Thus, price cap regulation attempts to provide an effective discipline to firms possessing market power, but at a lower regulatory cost and in a form that provides incentives for firms to be cost efficient. The broad term for this type of regulation is "incentive regulation", as it provides an incentive for firms to control and reduce costs and increase productivity. Price cap is perhaps the most widely known and most widely adopted form of incentive regulation.[7]

[6] The discussion of price cap regulation also is relevant for revenue cap regulation. The two approaches are very similar, with one setting the maximum price that can be charged, while the other sets the maximum revenue that can be generated, in the areas under regulatory oversight.

[7] Other forms of incentive regulation include yardstick competition (prices are allowed if they are consistent with prices adopted by firms in competitive markets); automatic rate adjustment mechanisms (which automatically increase all prices when costs increase); and sliding scale plans (a variant of price cap regulation whereby efficiency gains of the firm are shared between the firm and its customers). See R.L. Mansell and J.R.Church (1995), *Traditional and Incentive Regulation,* Van Horne Institute University of Calgary, for a discussion.

2.4 Light Handed Regulation and Other Forms of Pricing Constraint

Light handed regulation is a term applied to a range of methods intended to constrain pricing power by infrastructure firms who may have some degree of market power. One might debate whether these methods should be described as 'regulation' or as constraints on market pricing.[8]

2.4.1 Trigger Regulation or Price Monitoring

Trigger regulation is an approach which attempts to restrain the exercise of market power of a firm, with the threat of regulation. Legislation is put in place which grants powers to a government agency to regulate the charges of an infrastructure service provider. However, the agency defers the exercise of those powers, provided that the infrastructure company does not set charges which are too high. If high charges are set, then the agency will immediately exercise its legislated powers and subject the company to price regulation.

It is the credibility of the threat of regulation that is the key to the success of trigger regulation. If the regulation threat is not credible, then it will not act as a constraint on the company's pricing behaviour. For trigger regulation to be effective, it is necessary that the regulatory powers be established in legislation. Without legislative authority, the regulatory threat may lack credibility. Effectiveness also requires that the trigger criteria be established, so that activation of regulation is not viewed as arbitrary, or as being unlikely. The criteria in turn should be clear and should be linked to measures of economic efficiency. The process of monitoring prices and quantities in the market and comparing to benchmarks or other means will have its own costs associated with it, but this is highly likely to be at a lower cost than heavy handed or price cap regulation.

There are considerable advantages of this regulatory format. Neither the firm nor the regulator incurs costs of regulatory procedures (unless the trigger is pulled). The firm has considerable freedom for setting and changing prices. Monitoring also allows flexibility in the face of unforeseen events.[9] It also has the benefit that it does not significantly distort the functioning of competitive markets. If airports do not have market power and markets are performing effectively, then trigger regulation does not significantly interfere with this in the way that price cap can.

Australia. Trigger regulation has been adopted in Australia and New Zealand. In the case of Australia, trigger regulation has replaced an earlier attempt at price cap regulation. The Australian model, referred to as price monitoring, specifies five year independent reviews of airport pricing and behaviour which have the potential to trigger more heavy handed regulation. Under this regime, an airport is required to periodically report its individual prices and an overall price index. The regulatory agency assesses these reported prices and determines whether to continue with the prices monitoring regime, to impose regulation, or whether to remove the prices monitoring requirement entirely.

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[8] In some jurisdictions, 'regulation' is a term that may be defined in law or carry implications for the interpretation or application of existing laws. The discussion here of 'regulation' is intended in the meaning of constraints on exercising market power, rather than as with a regulatory or legal meaning.

[9] Forsyth, P. et al., The Economic Regulation of Airports: Recent Developments in Australia, North America and Europe, Ashgate Publishing, Aldershot, 2001, chapter 1.

The Australian Productivity Commission conducted a review of airport regulation in Australia in 2011, and provided the following conclusions regarding the trigger regulation:[10]

- Under the light-handed monitoring regime that replaced price cap regulation there has been a marked increase in aeronautical investment and airports have not experienced the bottlenecks that have beset other infrastructure areas.
- A review of aeronautical charges does not suggest an inappropriate exercise of market power.
- Service quality outcomes overall are 'satisfactory' to 'good', although airlines had, on occasion rated two airports as 'poor'.
- Australian airports' aeronautical charges, revenues, costs, profits and investment appeared reasonable compared with (the mostly non-commercial) overseas airports.
- Commercial agreements with airlines had become more sophisticated. Agreements often include service level obligations, consultation on capital investment, price paths and dispute resolution when 'in-contract', but not during contract formation.
- While airlines had maintained that airports adopt 'take it or leave it' negotiation stances and some fail to provide adequate information, no party sought a return to regulatory price setting, given past experience with its associated costs.
- Price monitoring aims to constrain airports from inappropriately exercising any inherent market power. But neither the regulator nor Governments have acted when the regulator has raised the possibility that some airports might potentially be exercising market power.

New Zealand. In New Zealand, the approach is more general and looser, as the relevant minister can undertake a review of pricing behaviour in any industry, and there is no existing legislation that would immediately empower a New Zealand Agency to regulate (i.e., constrain by a regulatory order) airport charges by any format. It is not clear that the benefits of the Australian experience with light handed regulation are applicable to New Zealand, as the Australia regime has a credible threat of regulation enshrined in the Competition and Consumer Act Prices Surveillance Act [11]and other legislation. In New Zealand, there is no prior airport regulatory regime governing airport charges.

U.K. Although not explicitly stated as such, the regulatory regime in the UK is another example of trigger regulation. Airports in Scotland are not currently subject to price regulation, but could be subject to such regulation if the UK CAA views they are exploiting their market power. The operator of the airports at Glasgow, Edinburgh and Aberdeen voluntarily capped revenue per passenger at their airports, which may be due in part to threat of regulation by the UK government. This suggests that the credible threat of

[10] Australian Government Productivity Commission, "Economic Regulation of Airport Services", Inquiry Report No. 57, 14 December 2011, page XX.
[11] Originally the Prices Surveillance Act, which was subsumed into the Trade Practices Act, which was replaced the Competition and Consumer Act.

regulation (credible because legislative authority was in place to implement regulation) played a part in constraining the private airport operator's behaviour, without the need to apply direct regulation.

Canada. Canada does not regulate its airports, but it has provisions for review of air traffic control charges by Nav Canada. However, the rate appeal mechanism is severely limited to only determining whether Nav Canada followed it its own price setting policies and the Canada Transportation Agency has no powers to review the substance of any rates set by Nav Canada. Here, the threat of regulation is weak, at best.

2.4.2 Regulation by consultation

Consultation is a form of self-regulation whereby the firm consults with its customers prior to altering its prices.[12] However, the firm is under no obligation to adjust its pricing as a result of the consultations. Thus, a distinction has to be made between an obligation to consult and an obligation to negotiate price changes.

A principle aim of consultation by airports is to increase the negotiating power (some might say the countervail power) of airlines vis-à-vis airports. This is part of the reason consultation is specified in European Union Directive 2009/12/EC on airport charges,[13] (described in more detail in Section 4.2). A requirement for consultation may offer some degree of pricing discipline if the firm faces the real threat of countervailing action by its customers or the threat of government intervention or regulation.

Consultation has different implications for small airports than for large gateway airports. A small airport is far more sensitive to the threat of service loss by airlines. A single airline may provide all the commercial service, or there may be only 2 or 3 service providers. Even if regulation requires an airline to maintain service, the carrier can reduce that service to a minimum level. Stated differently, at smaller airports, airlines are more likely to have meaningful countervail powers. A requirement for consultation may act as a meaningful constraint on the exercise of market power by a small airport.

At gateway airports, however, there typically are multiple carriers, and/or poised entry if a carrier were to withdraw or reduce service. The actual competition or poised entry by competitors negates, or at least greatly reduces any negotiating power of most airlines.

It might be argued that large airlines at large airports have considerable countervail power. However, this is not necessarily the case. A large carrier may have significant investments in facilities and marketing which are effectively sunk. This reduces the power of the airport. As well, entry barriers may prevent the carrier from moving to a lower cost airport. This is especially problematic in the case of New Zealand. A carrier such as Air New Zealand will generally be denied the ability to enter any other national market due to foreign ownership laws and ownership/control restrictions in bilateral air service agreements.[14]

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[12] As was noted above, regulation here is meant in the context of constraining pricing behaviour by firms. Self-regulation is not regulation in the sense that there is a legislated constraint on prices or a legislatively appointed agency empowered to deny or set prices.

[13] European Union, "Directive 2009/12/EC of The European Parliament and of the Council of 11 March 2009 on Airport Charges", preamble, paragraph (2).

[14] In the case of New Zealand air carriers, they are allowed to operate domestic air service in Australia, but cannot operate international routes (other than trans-Tasman routes) from Australia, creating a formidable entry barrier to moving from New Zealand to another market.

The arguments in favour of this regime are that it is cost effective (as regulators are not directly involved) and it offers pricing flexibility.[15] It also may give the airlines a voice in some of the airport's investment choices.[16]

However, several issues have been raised with relying solely on consultation. In some cases where customers or users do not have sufficient countervailing power, the consultation process will not prevent a firm from charging excessive prices, essentially defeating the purpose of consultation. If there is no threat of action against the firm, there is little incentive for the firm to adjust prices in line with the consultation. This is especially likely at gateway airports, as discussed above.

Similarly, there can be little incentive for the airlines to agree to any price rises. This is particularly the case where the consultation is backed up by an appeals process (as is the case with EU Directive 2009/12/EC). The appeals process, which all users in the EU can avail of regardless of the degree and quality of their involvement in consultation, at a minimum postpones the implantation of charges at little cost and will always give users at least a chance of getting a better deal.

Thus, the policy makers need to consider how to best incentivise users to engage constructively in the consultation process. One possibility is the threat of regulation (trigger regulation), as described in the previous section, although the effectiveness of this depends on how credible is the threat of actually regulating an airport's charges.

2.4.3 Price constraint by contract

Long term contracts are bilateral agreements between a firm and its customer, and can contain clauses dealing the prices to be charged and paid. Formal regulation is not used, and instead, a contract which is enforceable in the court is put in place. For this reason, provided that the contract is comprehensive in its coverage of charging principles, it may be as effective as direct regulation but without its regulatory costs.

Under this approach, the infrastructure provider enters into a long term contract with its customer. The contract would specify what charges the company can impose on its customers, the principles for setting those charges, and a contractually binding process for changes in charges.

The concept here is that airport users (airlines) enter into contracts with full knowledge of the economics and dynamics of the industry. If a customer freely enters into a long term contract with a service provider, then that contract would normally contain pricing provisions which would prevail for the duration of the contract. Typically these will include provisions for cost adjustments.

This type of pricing constraint is possible where a firm has a small number of customers who are knowledgeable and can enter into a long term (or renewable) contract. However, where there are a large number of customers, a small number of major customers may enter into a contract which governs the principle for setting fees and charges (e.g., signatory airlines).

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[15] Tretheway, M., "Airport Ownership, Management and Price Regulation", March 2001.

[16] Smyth, M. and B. Pearce, "Economic Regulation", IATA Economics Briefing N^0 6, February 2007, page 39.

The effectiveness of this approach will depend on the relative bargaining powers of the buyer and seller. Some market conditions may provide the needed balance. For example, a rail carrier may be considering construction of a new rail line to serve a customer with a new plant. Because the asset has not yet been built, there is a dedicated customer (or small number of customers), and the long life of investments of both buyer and seller, regulation by contract may produce a desirable outcome for both parties. In an airport context, the motivation may be the need to construct a new terminal or runway. The major users of the facility could enter into a long term use agreement which specifies the pricing regime that will apply for the life of the asset.

The benefits of this approach are similar to those listed above for consultation; there are incentives towards reaching technical and dynamic efficiencies, risk is shared between the firm and the customer, and it is inexpensive. As the contract is agreed upon by both the airport and the customer, both parties would not have barriers to impede technical efficiency as it is in the best interest of both parties. Likewise, risk is split between the airport and the customer, making both parties deter from risky choices. Lastly, it is an inexpensive form of pricing constraint as regulators are not involved, as provisions for later changes would be already agreed upon in the contract.

The arguments against binding long term contracts as a form of constraint on pricing are the potential for loss of allocative efficiency, and the timeliness being dependent on the length of negotiations. In regards to allocative efficiency, long term contracts have the potential to increase the market power of incumbent airlines at the expense of new entrants, as the contract can allow the incumbent to influence airport development and policy to its own advantage. However, this can be addressed by the terms of the contract. On the other hand, some will argue that the need for a contract endows market power on an airport vis a vis an airline customer, if the latter is not allowed to utilise the airport absent a contractual "use agreement." Timeliness is a major issue with regulation by bargaining if parties come to an impasse on issues, and bargaining is stalled until compromise is found.

There are a number of instances where long term contracts have been used as the basis for determining airport pricing:

- In the U.S., many airports have entered into binding, contractual arrangements with air carriers governing airport fees and charges, as well as capital programs undertaken by the airports. The original motivation for some of these contracts was to provide security for airport borrowing via the issuance of revenue bonds. These contractual relationships have been instrumental in the fact that airline-airport rate disputes have been relatively infrequent in the U.S.
- Again in the U.S., in the proposed privatisation of Chicago Midway Airport, the City of Chicago (the owner of the airport) entered into a long term contract with the major users of the facility, and the successful bidder would be obligated to honor that contract. This gave a degree of certainty to the potential bidders while providing users with a meaningful long term pricing constraint without the need for formal regulation.[17]
- Similarly, many long term concession agreements, where the government awards the operation and development of an airport to a private company or consortium, can be used as a means of regulating

[17] While the privatisation process resulted in the selection of an operator in late 2008, the latter was unable to complete financing of the bid payment due to the general collapse of U.S. financial markets in 2008 and 2009.

airport pricing. The concession agreement can set out the future level of airport charges, investment requirements, service quality standards and expected efficiency improvements. The bidders for the concession determine their bid price and/or revenue-sharing with the government on the basis of these concession terms. In such cases, a balance needs to be struck between the level of charges and the revenue potential to government.

- In Germany, Fraport has entered into five-year contracts with airlines at Frankfurt Airport. Airlines agreed to growth in airport charges that varies inversely with passenger traffic development. If growth in passenger traffic exceeds expectations, permitted growth in airport charges will be lowered.
- In Denmark, Copenhagen airport has signed agreements with its airline users on the price path for airport services for specified periods of time.

2.4.4 Regulation by orders in council from the Governor-General

Section 38 of the *Civil Aviation Act 1990* provides for limited power for the Governor-General to set charges at airports:

> "Fees and charges in respect of the use of any airport operated or managed by an airport authority shall not be prescribed, *except on the advice of the Minister given after consultation with that airport authority.*" [emphasis added]

The powers of the Governor-General amount to regulatory powers. However, it is a process which does not require a cumbersome regulatory submission every time an airport authority wishes to change its prices. The process allows users a means to control the worst pricing abuses by a monopoly infrastructure provider. However, the process may be undesirable for users, the airport authority and the government. Essentially this is a political process. It enmeshes government (distinguished from an agency of the government) in decisions on day to day activities of a company and its customers, rather than confine its role to one of establishing policies which are expected to prevail for a longer period of time. For the company and its users, the political process is one with uncertainties and the potential for different results as government officials come and go.

2.4.5 Price constraint via an arbitration option

Arbitration is a method of dispute resolution generally outside the courts, wherein the parties to a dispute refer it to one or more persons (the arbitrators or an arbitral tribunal), by whose decision (or award) they agree to be bound. There is also non-binding arbitration where the parties do not agree to necessarily abide by the arbitrator's decision, leaving open the option to pursue resolution by other means such as court action.

There are a number of forms of arbitration procedures, in terms of the process by which the arbitration takes place and the manner in which the arbitrator can make the award. One effective form of arbitration is Final Offer Arbitration (FOA), also known as pendulum or straight-choice arbitration, or in the U.S. as baseball arbitration. In FOA, both sides submit their proposals to the arbitrator, and the arbitrator then chooses one or other of the options, based on the merits of the case. The arbitrator must choose one of

the options, and cannot select an alternative position which is not presented by one of the parties. Both sides are bound to abide by the ruling. For example, in a wage dispute, the employer and the union might each submit a wage level to the arbitrator, one of which is then chosen by the arbitrator. The arbitrator cannot "split the difference."'

FOA is an intentionally high-risk form of arbitration. By removing the option of any type of compromise position, the process is designed to encourage the parties to settle the dispute through their own negotiations rather than resort to a third-party decision maker. Should they nonetheless proceed to arbitration, the process design disciplines the parties to advance tempered final offers. The more ambitious a party's position, the greater the likelihood that the other party's final offer will be selected by the arbitrator.

Other forms of arbitration exist, including cases where the arbitrator can select his/her own set of airport fees. These formats are less extreme than FOA, but as a consequence, the parties are less incented to put forth best offers. Instead they may put forth offers that are more extreme, assuming that the arbitrator will split the difference.

Arbitration provides a vehicle by which a contract may be established. Arbitration and contracts often are an effective means to constrain potential market power, although not necessarily with the formalities of a regulatory agency approach. As a dispute resolution mechanism, arbitration should be considered a light handed and often effective approach to constrain exercise of market power, where regulatory procedures are enshrined in law and outcomes are typically reviewed by the courts. Arbitration might be especially appropriate for those cases where it is not possible to enter into a long term contractual relationship prior to major capital investment (e.g., for cases where the capital assets are already in place).

There are a number of advantages to resolving disputes by arbitration, especially FOA:

- They reflect the preferences of the parties, rather than those of the regulator;
- They provide for flexibility of response to changes; and
- They encourage the parties to work together.

There are a number of examples of the use of FOA.

Rail, air and marine transport – Canada. The use of final offer arbitration is provided for under the *Canada Transportation Act*. It apples to rail freight rate and/or service disputes, disputes related to domestic movement of goods by air and to movements by water related to northern resupply of remote communities.[18]

Unlike many mediation/arbitration processes, an FOA proceeding can be initiated by a user (e.g., shipper in the case of rail) alone. If the shipper cannot reach agreement with the Service provider (e.g., railway) on rates or any of the conditions of the movement, the shipper can submit a written request for an FOA to the Canadian Transportation Agency. Assuming the shipper meets the specified requirements regarding what is included in the submission (the final offer made to the carrier excluding rates, an undertaking to ship the goods in accordance with the arbitrator's decision, a commitment to pay half the cost of the

[18] Rail disputes regularly utilize FOA (averaging two per year); we are unaware of any FOAs held regarding air cargo or northern resupply.

arbitrator's fees, and the name of the arbitrator, if any, that has been agreed to) and has given proper notice (at least five days) to the railway, the FOA is triggered.

Both parties have 10 days to submit their final offers (rates and conditions) to the Agency.[19] Within five days of receipt of the final offers, the Agency refers the matter to arbitration. The Agency maintains a list of persons eligible to conduct an FOA proceeding. The eligible parties are not agency staff – they are independent of the Agency as FOAs are not considered proceedings before the Agency.[20] If the parties could not agree on the arbitrator, or panel, the Agency will make an appointment.

The arbitrator must conduct the proceedings as expeditiously as possible and in the manner he/she/they deem most appropriate, subject to Agency specified rules of procedure. The parties have 15 days to exchange the information they plan to submit to the arbitrator. Seven days after that, the parties may direct interrogatories to the other party, which must be responded to within 15 days.

The arbitrator has the ability to request additional information from the parties unless both parties have agreed to limit the amount of information to be provided. In general, hearings are held, lasting four to five days for cases involving large traffic volumes – shorter for cases where the amount in dispute is modest. The hearings are not as formal as court hearings, but do follow a set structure including evidence in chief, cross-examination, redirect examination and closing argument. It is not unusual for each party to have three or so expert witnesses testifying and use outside counsel in addition to staff counsel. Including fees for the arbitrator, legal counsel and expert witnesses as well as internal staff time, a hearing can cost each party in the range of one million dollars for the more significant cases, much less for more modest traffic.

The arbitrator is to take into account in making the decision whether the shipper has "an alternative, effective, adequate and competitive means of transporting the goods" available. The arbitrator is also to consider other matters that appear to be relevant.

The decision is made in writing within 60 days of the date the submission was filed with the Agency by the shipper. In Canada, the decision is valid for one year, or a lessor period that may be appropriate. No reasons for the decision are provided, unless all the parties request the reasons for the decision, in which case the arbitrator has 30 days to provide written reasons.

There is also a simplified version of FOA that can be used if the amount of the freight charges under dispute is less than $750,000. This involves simply the submission of the final offers and a response to the other party's final offer within seven days. The arbitrator can then make a decision based on the offers and responses, or request a hearing. The decision must be rendered, in writing, 30 days after the submission was received by the Agency. Again, no reasons are given, but if all parties desire written reasons, the arbitrator must provide them within seven days.

The result of the FOA is binding upon the parties, and carries the same legal standing as a court order.

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[19] While this may seem like a short time period, almost inevitably the FOA request follows a period of commercial negotiation between the parties and each will have already developed offers, although not necessarily their final offer.

[20] The Agency, however, is allowed to provide administrative, technical and legal assistance, if requested, on a cost-recovery basis.

FOAs have been deemed a success in Canada,[21] and are viewed by rail shippers as an effective means of constraining railway pricing power. Another measure of success is the fact that about half of the FOAs that are triggered in Canada are actually resolved by the two parties prior to the completion of the arbitration process. In developing a reasonable offer to submit to the arbitrator, the two parties often find themselves close enough together that they can resolve the remaining differences.

Access to Export Port Terminal Services – Australia. In Australia, a number of wheat exporters own and operate port terminal facilities. They are, however, required to provide access to other shippers so as to ensure these vertically integrated operations do not impede competition in the wheat export sector. The undertakings required by the Australian Competition and Consumer Commission for these integrated operations to pass muster include recourse to arbitration to resolve failures to agree to terms on access between the integrated operator and other shippers of wheat.

Telecommunications – U.S. and Canada. Final offer arbitration has also been used in the telecommunications sector in the U.S. (Federal Communications Commission) and Canada (Canadian Radio-television and Telecommunications Commission). For example, when General Motors Corporation and Hughes Electronics Corporation reached agreement with News Corporation Limited to transfer control of various broadcasting licences, including satellites, earth stations and wireless authorizations, the Commission required that News Corporation submit to final offer arbitration when it and multichannel television programming distributors were unable to come to terms on a fair price for programming. In Canada, TELUS Communications Company requested that the CRTC initiate a final offer arbitration when it was unable to come to an agreement on the wholesale rates for its distribution of Sun News Network.

Telecommunications – the United Kingdom. The *Communications Act 2003* provides the Office of Communications (OFCOM) with dispute resolution powers. It provides considerable flexibility as to the approach: "The procedure for the consideration and determination of the dispute is to be the procedure that OFCOM consider appropriate."[22] OFCOM has the power to make a declaration setting out rights and obligations, to give direction fixing the terms or conditions of transactions between the parties, to give direction imposing an obligation for the parties to enter into a transaction on terms and conditions fixed by OFCOM, and to establish charges and require adjustments of under/over payment.[23] OFCOM also has the power to compel the parties to provide any information it requires. Decisions are appealable to the Tribunal. OFCOM has also established two procedures for resolving disputes between service providers and customers: Ombudsman Services and the Communications & Internet Services Adjudication Scheme (CISAS).

Land acquisition for pipelines – Canada. The *National Energy Board Act* has provision for final offer arbitration in situations where an energy company and landowner cannot agree on a price for lands required for a pipeline, or on damages arising from the operations of the company. The Act specifies the factors the Arbitration Committee is to consider in determining compensation, including market value, the loss of use of the land to the owner, any adverse effects on the remaining lands of the owner, etc.

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[21] Two major and separate reviews of the legislation have been conducted (1995-96 and 2000-2001) and each review confirmed the success of the arbitration approach.
[22] UK *Communications Act 2003*, Part 2 – Networks, services and the radio spectrum, Chapter 3 – Disputes and appeals, s. 188 Procedure for resolving disputes, sub-section 3.
[23] Ibid., s. 190 (2).

Electric Utilities – U.S. The Federal Energy Regulatory Commission includes provision for final offer arbitration incorporated within its Pro Forma Open Access Transmission Tariff. The arbitration is for disputes between a transmission customer and transmission provider involving transmission services, (except for changes to the rate or tariff, which are dealt with by the FERC directly).

Labour relations – Canada. The *Protecting Air Service Act* required Air Canada to resume services, and for members of the International Association of Machinists and Aerospace workers to resume work and extended the terms of the collective agreement that had expired. The Act also referred the dispute to final offer arbitration.

FOAs have also been used in a number of labour relations cases in nations such as the U.S. and U.K.

We understand that in the failed privatization of Chicago Midway International Airport the City negotiated a contract that specified the rates that could be charged by the new operator. The contract provisions for extension included arbitration provisions to resolve disputes.

This form of regulation also lends to achievement of efficiencies, shared risk between the parties, fairly timely decision making processes, and it is inexpensive in comparison to many other regulatory schemes.

2.4.6 Summary

Table 1 evaluates each of the forms of regulation discussed previously on the basis of various criteria:

- **Technical Efficiency**. Producing goods and services at the lowest possible cost (or with the minimal use of resources).
- **Allocative Efficiency**. Ensuring that those goods and services most demanded are produced and go to those individuals or groups that most value them. Allocative efficiency is achieved when resources are allocated in a manner that maximizes net social welfare (the limited resources of a country are allocated in order best service the material requirements of consumers).
- **Dynamic Efficiency**. Dynamic efficiency is the ability to enhance technical efficiency over time, though the development of new processes and technologies, balancing short-run concerns (e.g., price level) and long term requirements (e.g., investment in research, development and innovation).
- **Investment**. Ability to provide the right signals and incentives regarding investment decisions. Sub-optimal investment decisions could result in insufficient capacity and congestion issues or, alternatively, over-investment resulting in under-utilization and over pricing.
- **Averch-Johnson Effect**. A regulated company may over-invest in order to achieve returns on a higher capital base. In some cases this may be investment in capacity greater than is needed to serve demand. In other cases it may involve investment which is not technically efficient (the gold-plating problem).
- **Risk Transfer**. The extent to which risk is shared between the regulated firms and its customers.
- **Price Discrimination**. Does the regulatory mechanism allow price discrimination? Price discrimination refers to the practice of charging different customers different prices for essentially the

same product. Price discrimination may be desirable result in situation where a regulated firm faces economies of scale and is not subsidised.

- **Cost of Regulation**. The financial cost, both to the government and the regulated firm, of maintaining the regulation mechanism.
- **Timeliness**. The ability and flexibility of the regulatory process to respond to changing market and economic conditions.
- **Information Requirements**. The amount of information required by the regulator in order to assess pricing decisions. Detailed information requirements increase the time and resources required to regulate and can result in erroneous decisions, particularly due to information asymmetry. This refers to the difficulty the regulator may have in obtaining adequate information on the regulated firm's operations and costs in order to determine the most economically efficient prices.

Table 1: Comparison of Criteria for Alternative Regulation Methods

Criteria	Rate-of-Return / Cost-of-Service	Price Cap	Monitoring / Trigger	Consul-tation	Binding Contract	Governor-General	Arbitration
Economic Efficiency							
Allocative Efficiency	High achievement	High achievement	Potential for high achieve-ment	Potential for low achievement	Potential for high achievement	Potential for low achievement	High achievement
Technical Efficiency	Cost plus regulation discourages adoption of new technology	Incentives to achieve technical efficiency	Potential for low achieve-ment	Potential for low achievement	Incentives to achieve technical efficiency	Potential for low achievement	High incentives to achieve technical efficiency
Dynamic Efficiency	Low achievement : Known to discourage adoption of new technology	Incentives to adopt new technologies, but regulatory approval typically required	Potential for high achieve-ment	Potential for low achievement	Incentives to achieve technical efficiency	Potential for low achievement	High incentives to adopt new technologies
Other Economic Objectives							
Investment	May tend to over-invest	Regulatory delays observed to delay investment	Some incentives for optimal investment	May tend to over-invest	Strong incentives for optimal investment	Uncertain	Strong incentives for optimal investment
Gold Plating	Outcome depends on regulator's diligence in examining appropriate investment and expenditures	Outcome depends on regulator's diligence in examining appropriate investment and expenditures	Depends on the credibility of the triggers	Firm is unconstrain-ed	Uncertain	Uncertain	Limited opportunity for arbitration of major capital decisions allowed
Risk Transfer	Risk largely transferred to customer	Risked shared between firm	Risk largely transferred to customer	Risk largely transferred to customer	Risked shared between firm	Uncertain	Risked shared between firm

Criteria	Rate-of-Return / Cost-of-Service	Price Cap	Monitoring / Trigger	Consul-tation	Binding Contract	Governor-General	Arbitration
		and customer			and customer		and customer
Price Discrimin-ation	Can be prevented, or enabled if appropriate	Pricing flexibility allows price discriminatio n unless prohibited	Pricing flexibility allows price discriminati on unless prohibited	Pricing flexibility allows price discriminatio n unless prohibited	Pricing flexibility allows price discriminatio n unless prohibited	Pricing flexibility allows price discriminatio n unless prohibited	Price discriminatio n a possibility if arbitration is by individual customers
***Regulatory* Process**							
Cost of Regulation	Very expensive	Expensive during quinquennial reviews	Inexpensive (depending on the trigger mechanism)	Inexpensive	Inexpensive	Inexpensive	Inexpensive
Timeliness	Long-time lags to make decisions	Long-time lags to make decisions	Trigger response may be slow	Long-time lags to make decisions	Depends on negotiation process	Likely to involve long time lags	Fairly timely decision process
Information Requirements	Extensive information requirement s	Fairly extensive information requirements during quinquennial reviews	Light information require-ments	Light information requirements	Light information requirements	Likely to have extensive information requirements	Light information requirements

2.5 Conditions Favouring Information Disclosure or Arbitration to Constrain Prices

Is it possible to provide comments as to when conditions favour use of one or both of these light handed formats? Here some comments are provided.

A regime consisting only of Information disclosure is suitable when the user has significant countervail power vis a vis the service provider. This format provides no opportunity for the service provider's rate to be challenged before a regulator, court or arbitrator. The constraint therefore must come from a meaningful power for the user to its only recourse – the recourse to not purchase the service. This might be the case when the user has other choices and/or when the loss user's patronage would cause a material change in the financial performance of the service provider. In the case of airports, an airline that has a choice of airports (e.g., London Stansted vs. London Gatwick) may be able to constrain airport

pricing. This of course is a case of competition in the market. For the case of small airports, with service from only one or a very few airlines, the threat of an airline cancelling service to the community may constitute sufficient countervail power to constrain an attempt by the airport operator to abuse its pricing power. Of course, circumstances can vary by location. An airport that is a highly popular destination resort and has service from only one or two carriers may face little or no air carrier countervail power.

Conditions favouring the potential for pricing constraint via an arbitration regime will include one or more of the following:

- *The nation has well established judicial processes governing commercial practices.*
  Arbitration is not a formal legal process but depends on conduct generally consistent with the presenting and hearing of evidence and depends on the arbitrator understanding his/her role in the context of the law and regulations governing the arbitration.

- *An orientation to market solutions and commercial decisions*
  An arbitration process may not be suitable to an economy which is transitioning from a command and control regime. FOA is a commercial oriented process and the parties must each understand and accept the role of markets in the economy and commercial processes and negotiations in market environments.

- *A lack of a regulator.*
  For final offer arbitration to work, it should be the last resort for the parties for the specific matter being reviewed.[24] Otherwise, the parties might not make their true final and best offers. Further, the arbitrator is put into a difficult role if his/her decision can be reviewed by another, more formal process. Arbitrators are more likely to view their role as that of a regulator and to follow regulatory processes if a regulatory option is available. This, of course, is not the intent of the FOA option. This option was established in lieu of using the regulatory agency enabled by legislation and regulators formally appointed by the government to make the decision in the specific dispute.

- *The parties are each sizeable organisations*
  The parties each need to be capable of researching issues and developing legal and economic arguments to support their respective positions. E.g., an airport where the users are all small air carriers may find little willingness by the users to avail themselves of an arbitration option. Arbitration is much less costly to administer than regulatory regimes but still entails costs for each application.

[24] There may be other processes available for more general reviews of issues, but not for the specific rates and traffic under dispute in the arbitration.,

3 What do the International Organisations Recommend Regarding Airport Price Regulation?

3.1 ICAO

The International Civil Aviation Organization (ICAO) recommended policies for airport pricing are set out in "ICAO's Policies on Charges for Airports and Air Navigation Services", Document 9082, Ninth Edition, 2012.[25] The document does not recommend that economic regulation of airports always be applied nor does it specify a particular format of regulation. It does state that any such economic regulation (referred to as economic oversight) should match the specific circumstances in each State, including degree of competition, balance of cost and benefits of oversight and institutional framework, and should be clearly separated from the operation and provision of airport (and air navigation) services. This economic oversight should seek to minimise the risk of market power abuses, ensure transparent and non-discriminatory pricing, encourage cost-effective investment, and balance the interests of passengers and other users with those of the airport (or air navigation provider).

In regards to the setting of airport charges, Document 9082 encourages States to incorporate in their national legislation the four key charging principles of: non-discrimination, cost-relatedness, transparency, and consultation.[26] However, it is neutral as to whether non-aeronautical revenues should subsidize aeronautical charges:

> "The cost to be allocated is the full cost of providing the airport and its essential ancillary services, including appropriate amounts for cost of capital and depreciation of assets, as well as the costs of maintenance, operation, management and administration. Consistent with the form of economic oversight adopted, **these costs may be offset by non-aeronautical revenues**." (Page II-1; emphasis added).

In other words, ICAO does not provide a recommendation for the application of single or dual till pricing.

3.2 ACI-World

In 2013, Airports Council International (ACI) - World produced its first manual on airport regulation. In the Foreword, ACI notes: "Over the past 20 years, airports have evolved from being simply public-sector infrastructure providers into sophisticated, business-oriented service providers." It goes on to note that a variety of ownership and governance models have emerged, including private sector ownership of some

[25] http://www.icao.int/publications/Documents/9082_9ed_en.pdf

[26] Non-discrimination in this case relates to the principles of applying the same charges to home and foreign carriers for the same type of service. It does not rule out charges that vary by time of day, aircraft type or noise profile. However, charges offered for the purpose of attracting or retaining new air services should only be offered on a temporary basis.

airports. The manual then goes on to describe different ways that regulation of airports could be implemented. The range of regulatory methods includes:

- Rate-Base Rate of Return Regulation
- Cost of Service Regulation
- Price Cap Regulation
- Trigger Regulation or Price Monitoring
- Mandatory Consultation
- Long Term Contracts
- Arbitration

It is notable that the ACI list goes beyond traditional rate base rate of return and the more recent price cap regulation to include a number of light handed regulation formats.

ACI does not recommend one specific type of regulation or even one type for each airport governance model. But it does provide a number of recommendations to guide airports and their communities. These are:

- Seek competition rather than regulation.
- The need for regulation should be determined on a case-by-case basis.
- Intelligent regulation should seek consensus solutions.
- Regulation should seek to be low cost and un-intrusive.
- Regulation should be dynamic and flexible.
- The regulator must be independent.
- Regulation should recognize that airports are incented to expand traffic to maximise commercial revenues rather than to exploit any available market power.
- If rigid price controls are applied, the format should be price cap.

This list is notable for focussing on a case-by-case approach and emphasising light handed regulation.

3.3 IATA

IATA has produced a number of papers on airport regulation and undertaken submissions before airport regulators in various jurisdictions.[27] In general, IATA is of the view that airports do have market and pricing power vis-a-vis their main users, the airlines. Its position on airport regulation is summarised as:

[27] E.g., Smyth, M. and B. Pearce, "Economic Regulation", IATA Economics Briefing N0 6, February 2007.

"IATA and the airlines support the need for strong, robust and independent economic regulation. Regulation is required to give sufficient protection to users against potential monopoly abuse of dominant position, especially for privatised or profit-maximising providers .The independence of regulators from government, especially for airports and ANSPs that retain a degree of public sector ownership, is critical in order to provide objectivity."

It identifies 10 "key elements" of airport regulation:

1. Effective stakeholder engagement should ensure the early and timely involvement of airlines in negotiations on business plans, future investments and operational expenditures. This involvement should continue until a successful conclusion is reached.
2. Transparency should be provided on the future business strategy and plans, future investments, essential historic and forecast financial and operational performance data.
3. Capital expenditure should only be undertaken with the agreement of airline users who agree both the need for and the financing of infrastructure.
4. Strong support to encourage airports and air navigation service providers (ANSPs) to strive for cost reduction, and better cost efficiency on a continuous basis by setting clear and measurable cost efficiency targets.
5. Agreed quality and operational performance standards through service level agreements. These should be regularly measured to ensure performance.
6. Charges should be non-discriminatory.
7. No cross subsidisation between user groups.
8. Single till should be applied at airports.
9. ICAO Policies on charges for airports and air navigation services should be applied.
10. An independent appeal body should be available in the event of a dispute.

In specific regulatory proceedings it provides additional recommendations. One of these is that the airport's regulatory aeronautical asset base should not include inflationary adjustments to the value of land, and instead land values should be based on book values at time land was acquired.

It is notable that IATA's recommendations do not include heavy handed regulation whereby the regulator establishes each individual charge at an airport. Nor does it recommend price cap or any other specific form of regulation. Instead, its focus is largely on process with guidance on key issues that are critical in the outcome of airport charges, specifically single till, non-discriminatory charges and airline agreement on major capital programs.

4 How do Other Nations Regulate Airports?

4.1 Introduction

The previous chapter briefly addressed what the key international aviation organisations say about regulation of airports: ICAO, ACI and IATA. Notable is that none of these recommend any specific regulation format. ACI perhaps stated this most clearly with its guidance that airport regulation should be considered on a case by case basis. Since these three global organisations have no specific recommendations on regulatory format, this chapter summarizes how some individual states regulate their airports.[28]

4.2 Summary of Existing Airport Regulatory Regimes

Background

Table 1 summarises the approaches to airport regulation applied around the world. It includes the countries covered in Appendix A as well as a number of other countries. It shows that price cap regulation has become fairly prevalent for the economic regulation of airports, although there is some use of light handed regulatory formats. The growth of price cap regulation is associated with the privatisation or commercialisation of airports in many parts of the world.

Recently, some jurisdictions are moving away from price cap regulation to light handed regulation, specifically Australia and (for some airports) the U.K. In the case of the U.K. and Australia, one reason was the growing complexity and cost of price cap regulation, although in the U.K. another factor was recognition of competition between some airports. The U.K. now only uses price cap regulation for London Heathrow and London Gatwick airports. For other U.K. airports the threat of regulation is credible as the legislation to enable regulation continues to exist and can be exercised by the U.K. CAA.

There is a considerable mix of single and dual till formats, as well as the use of hybrid approaches, although the majority of price cap regulation employs single till.

[28] A detailed description of the various regulatory regimes is provided in Appendix A.

Table 1: Regulation Format of Airports Around the World

Country/Airport	Regulation method	Accounting method
Canada	Contracts (cost-plus method)	N/A
United States	Contracts (cost-plus or rate-of-return method)	Single or dual till
Austria	Price cap (CPI-X)	Dual till
Denmark Copenhagen Airport	Mixed Negotiation and Price cap (CPI-X)	Dual till
Italy	Cost-plus method	Dual till
Poland	Not regulated	N/A
Portugal	Price cap (revenue per passenger)	Single till
Germany Frankfurt Airport Hamburg Airport	 Contracts (or cost-plus method) Hybrid price cap (CPI-X with a sliding scale)	 Dual till Dual till
United Kingdom Heathrow/Gatwick/Stansted	 Price cap (RPI-X)	 Single till
Ireland	Price cap (CPI-X)	Single till
Switzerland (Zurich and Geneva)	Negotiation Regulation of fees based on airport benchmarking (if negotiation fails)	Hybrid single till
The Netherlands	Cost-plus method	Dual till
France	Hybrid price cap	Adjusted single till
Russia	No set regulation method (government approval required for aeronautical charges)	N/A
Australia Sydney Airport	Price monitoring (trigger regulation) Price cap for regional air services Trigger regulation for other air services	N/A Dual till
New Zealand	Price monitoring (trigger regulation)	N/A
South Africa	Price cap (CPI-X+K)	Single till
Singapore	Price cap	Single till
China	Price-cap (based on airport size)	Single till
Malaysia	No set regulation method (aeronautical and non-aeronautical fees are regulated)	N/A
India New Delhi international Airport	Price cap (Inflation-X) Price cap (Inflation-X)	Single till Hybrid single till
Brazil	Price cap (CPI-X)	Hybrid single till
Argentina	Price cap (CPI-X)	Single till
Chile	Price cap	Dual till
Mexico	Price cap (revenue per passenger)	Dual till

4.3 Applicability to New Zealand

As noted above, there are cost and time issues associated with price cap regulation. The nations that rely on more light handed regulation, however, have airports that face competition and/or a credible threat of regulation, such as Australia and the U.K. In the case of Canada, government does not regulate airport charges at all and has no trigger regulation in place. However, with the vast majority of the Canadian population living within easy driving distance of the U.S., Canadian airports face a real competitive threat. Many Canadians can, and do, drive to U.S. airports to access lower cost services. Airports are thus constrained in the prices they can charge.

The situation in New Zealand is far different.

Geography effectively shields airports from competitive pressures from other airports. Given the long time it would take to drive/ferry to a competing airport, consumers have little effective choice in airports. The same is true of shippers, where air cargo's chief advantage – speed – is negated if the goods must undertake a lengthy surface journey to access the air service. This lack of effective alternatives gives their local airport a greater ability to exercise a degree of market power.

In addition, the major carrier(s) face significant entry barriers (foreign ownership limits) to establishing air services at other airports as a supply response to unduly high airport charges.

Information disclosure may be adequate for non-gateway airports where airlines have significant countervailing power. This power stems from the relatively small amount of services provided and limited traffic demand. If an airline reduces or eliminates service in response to high airport charges, there is a credible possibility that no other airline steps in to replace the lost service(s). The airport could potentially price itself out of existence. Information disclosure, however, is unlikely to be sufficient at gateway airports where the threat of reduction or elimination of services is less credible. Given the higher demand for services, it is far more likely that a reduction in services by one carrier would be offset by an increase in service by another carrier. This means that carriers have limited countervailing power at these airports.

Given the nature of its airports and its geography, information disclosure will not suffice to curtail the market power of airports in New Zealand. The next chapter discusses the possibility of combining information disclosure with a negotiate/arbitrate mechanism.

5 Information Disclosure and Negotiate/Arbitrate as Constraints on Airport Pricing

5.1 Introduction

The subject of the current New Zealand white paper is whether or not information disclosure, a light handed means of regulation, is an effective constraint on airport market power. Section 2.4 already provided some discussion of the format and the issues under the headings of prices monitoring, price constraint by consultation, and trigger regulation. Key points included:

- The effectiveness of these light handed regulatory formats depends on the credibility that heavy handed or price cap regulation would actually be imposed.
- This in turn depends on whether or not there is existing legislative provision to implement such regulation and the degree to which regulatory powers and procedures are established.
- At small airports, airlines may have some degree of countervail power from their ability to remove or reduce service, and thus light handed regulation is more apt to be effective.
- At large gateway airports, light handed regulation is less likely to be effective. A carrier that threatens to withdraw or reduce service may merely see a competitor fill in the gap. A large carrier at the airport may have sunk costs making the threat of withdrawal incredible, and may face regulatory constraints that prevent it from establishing its hub at another airport in another jurisdiction.

5.2 Experience of Australia

Prior to 2002, Australia regulated its major gateway airports using price cap regulation. While not quite as cumbersome as the price cap regulation used by the UK for its four major gateway airports, Australia's regime required a significant amount of data, expense and time to complete. In 2002, the government suspended price cap regulation and replaced it with a light handed prices monitoring regime. One cynical view is that the change came about as a consequence of the process of privatising Australia's largest gateway, Sydney, as the decision was time just shortly before bids were due for the shares of the Sydney Airports Corporation Ltd. (SACL). This view is that the replacement of price cap regulation allowed the government to realise a higher price for SACL shares, as light handed regulation would facilitate higher fees and charges and thus drive a higher share price. To be clear, if the light handed regulation regime enabled higher fees and charges, the corresponding "monopoly rents" would accrue to the government and not to the new owners. While the final verdict lies in the confidential financial models of the bidders, the government's realised price exceeded expectations formed in 2001 when the price cap regime was in place.

A 2011 report of the Australia Productivity Commission (APC) reviewed the most recent five years of light handed regulation (the second such review).[29] The APC defined the new regime as:

> *"Light-handed monitoring regime: A regulatory regime whereby the ACCC is empowered to monitor price and quality of aeronautical and car parking services at the five monitored airports" (p. XV)*

The monitored airports are the five major gateways: Adelaide, Brisbane, Melbourne, Perth and Sydney. (p. XV). The objective of price monitoring was stated as "to constrain airports from inappropriately exercising any inherent market power." (p. XX)

The report describes the price monitoring regime:

> *"Provisions in Part VIIA of the Competition and Consumer Act (CCA) and the Airports Act provide for the ACCC [Australia Consumer and Competition Commission] to monitor the prices, costs and financial returns relating to the supply of aeronautical and related services at designated airports. Relevant services include: aircraft movements; passenger processing, including security; landside vehicle access; and car parking. Retail, rental and business park activities are not monitored under the 'dual till' approach. The ACCC also reports on service quality, drawing on information from airports, airlines, passengers and border agencies.*
>
> *The information enables the ACCC to ascertain if airports may have misused their market power. If monitoring indicates that further investigation is required, the Government can direct the ACCC (or another body) to undertake a public inquiry, potentially resulting in the reintroduction of stricter price controls at particular airports.*
>
> *Separately, at any time, an airport user can apply to the National Competition Council (NCC) for relevant airport services to be declared under Part IIIA of the CCA. If the criteria are satisfied, the Minister may declare access, providing a right for the parties to negotiate terms and conditions, backed by resort to binding arbitration by the ACCC." (p XXII)*

The 2014 report commented on the first (2006) review, stating:

> *"In 2006, the Productivity Commission conducted a review of the regulatory arrangements for pricing airport services. The review examined the price monitoring regime that had replaced the price capping regime in 2002. The review found that the price-monitoring regime had delivered important benefits, and recommended that the existing arrangements continue." (p IV)*

The report made a number of observations. Some of the comments are positive:

- *"Under the light-handed monitoring regime that replaced price cap regulation:*
  - *there has been a marked increase in aeronautical investment and airports have not experienced the bottlenecks that have beset other infrastructure areas*
  - *aeronautical charges do not point to the inappropriate exercise of market power*
  - *service quality outcomes overall are 'satisfactory' to 'good', although airlines have, on occasion rated two airports as 'poor'*

[29] Australian Productivity Commission, Economic Regulation of Airport Services, Productivity Commission Inquiry Report No. 57, 14 December 2011. http://www.pc.gov.au/projects/inquiry/airport-regulation/report.

- *Australian airports' aeronautical charges, revenues, costs, profits and investment look reasonable compared with (the mostly non-commercial) overseas airports." (p. XX)*

However, a key observation was:

- *"Price monitoring aims to constrain airports from inappropriately exercising any inherent market power.* ***But neither the regulator nor Governments have acted when the regulator has raised the possibility that some airports might potentially be exercising market power.****" (p. XX) [emphasis added]*

The APC notes that the smallest of the regulated (or price monitored) gateway airports, Adelaide, may have little market power, and/or its users have sufficient countervail power to justify removal of this airport from the list of airports 'declared' for the prices monitoring regime. If implemented, Adelaide would join the other smaller Australian airports in being free from any government regulation, and instead join the ranks of "self-regulated" airports.

> *"Adelaide airport's recent investments, size, position in the national network and long-term customer contracting ensures that the countervailing power of airlines is an effective constraint against its relatively low market power. The Commission proposes that Adelaide airport should be excised from the price monitoring regime, and instead be included in the current 'Tier 2' self-administered monitoring regime." (pp. XL-XLI)"*

The APC also points out that the Australian regime was not confined merely to constraining pricing power, but also to cover service quality. Here, it states that the monitoring regime is less effective:

> *"The Commission has little issue with the robustness of the price and financial data reporting requirements, but has significant reservations about the derivation and reporting of quality of service monitoring. It has made several recommendations for content and process improvements in this area." (p. xli)*

Some key conclusions include [emphasis added]:

- *"FINDING 5.1*
  The continued growth of low-cost carriers, overseas national airlines and competition from some secondary airports have reduced the potential for airports to exploit market power. Nevertheless, ***Brisbane, Melbourne, Perth and Sydney Airports retain sufficient market power to be of policy concern. (p. xlvi)***

- *"FINDING 9.1*
  Despite complaints from airport users and the public stance on airports taken by the Australian Competition and Consumer Commission (ACCC), ***existing safeguards have been very little used.*** *The ACCC has not called for, nor has the relevant Minister instigated, a price investigation of any airport. " (p. XLIX)*

- *"RECOMMENDATION 9.5*
  Assessments of airport behaviour during the next period of price monitoring should continue to be governed by an overarching set of principles. ***All the current 'Pricing Principles' should be retained****." (p. 200)*

- *RECOMMENDATION 9.8*
  There should be a further period of price and quality of service monitoring *at Australia's major airports when the current arrangements end in June 2013. The new arrangements should continue to apply to Brisbane, Melbourne, Perth and Sydney airports until June 2020 and be subject to a review in June 2018." (p. 214)*

One aspect of the 2006 report of the APC deals with the issue of a potential arbitration remedy for airport users. This is dealt with later in this chapter.

5.3 Comment on changes in UK for non-London airports

The United Kingdom was the first major economy to privatise its airports (BAA privatisation in 1987), and the first to establish a regulatory regime for airport charges. The regulatory regime is a price cap regulation, with 5 year reviews of each airport. The current price cap regime has been criticised by some as having become onerous, with reviews requiring several years to complete. The original regulatory regime embraced a number of UK airports but was quickly simplified to 4 major gateway airports: London Heathrow (LHR), London Gatwick (LGW), London Stansted (STN) and Manchester (MAN).

In 2014 the UK CAA removed price cap regulation from Manchester and Stansted.[30] One reason was that competitive conditions between airports were viewed as sufficiently strong to constrain prices and that carriers had some countervail power. It is difficult to understand why Gatwick was not similarly exempted, as it is dominated by low cost carriers, the largest of which operate from other London area airports.

In any event, LHR and LGW, arguably the UK's two major gateway airports, were viewed as cases where the market power of the airport operator was sufficient that competition and countervail power was insufficient to constrain the pricing power of the operators. Carriers continue to enjoy rate relief via a price cap regulatory regime. At the same time, the UK has determined that an onerous price regulation regime is not necessary at the smaller airports in the UK.

5.4 Comment on use of benchmarking to complement information disclosure

Another approach that was tried, although ultimately abandoned was to utilise a benchmarking process to assess the reasonableness of airport charges. As discussed in Section 4.2, the Commission for Aviation Regulation (established by the Aviation Regulation Act 2001) is charged with the determination of the maximum level of airport charges at Irish airports with over one million passengers per annum (and its air navigation service provider). Aeronautical charges at Dublin Airport are regulated using a price cap.

In setting the productivity target for the price cap, the Commission had attempted a benchmarking process. Some airport costs were benchmarked against peer airports elsewhere in Europe and some costs against non-aviation Irish businesses. Targets were set for the regulated airports based on gaps between recent airport performance and the set of peers.

Almost immediately this regime came under criticism. The main challenge was defining peers. Conditions at other airports were significantly different in terms of traffic volume, traffic mix, operating conditions, etc.

[30] The CAA recommended removal of price cap regulation of STN and MAN in 2007.

that the airports argued the productivity targets were unachievable. The benchmarking approach was quickly abandoned.

It is notable that that Irish regulatory regime embraces not only airport charges but also various dimensions of service quality. The current regime sets minimum requirements for service quality and offers financial incentives (in the form of an increase in the revenue cap) for achievement above a specified standard (such standard being greater than the minimum standard).

Ireland has chosen to continue price cap regulation of its gateway airports and has not followed the path of Australia of moving to a light handed regulatory regime.

5.5 Final Offer Arbitration: The Case of Canada's Railways and Maritime Sector

The following section turns to the specific issue of whether an arbitration mechanism would be desirable as a supplement to the existing information disclosure regime. In this section, we comment on the case of final offer arbitration (FOA) used in Canada's rail and maritime sectors.[31] The reason for examining Canada's regime is because a number of comments on arbitration made by the APC in Australia (discussed in Section 5.6) seem to be of special cases and not wholly applicable to airports in New Zealand.

Beginning in 1987, Canada's National Transportation Act (now the Canada Transportation Act, 1996) removed maximum rate regulation except for two special cases (interswitching services and the transport of certain grains in western Canada) and provided a number of other pricing remedies for shippers. The most extensively used of these are the FOA provisions. Key elements of Canada's FOA regime are:

- Shippers unsatisfied with a rate negotiated with carriers, can apply to the Canada Transportation Agency for FOA.
- The Agency requires each of the shipper and carrier to submit their final offer rate (and conditions such as who provides rail cars).
- The Agency designates an arbitrator, who is not a commissioner.[32]
- The legislation designates specific time frames for submission of evidence, holding of a hearing,[33] and decision by the arbitrator.

The FOA process has been subject to two major reviews of the legislation, and while there have been issues identified,[34] the two reviews identified FOA as a major form of rate relief for shippers and

[31] The FOA remedy is available to domestic maritime shippers (primarily hauling bulk commodities on the Great Lakes), but in practice has not been used.
[32] The Agency maintains a list of potential arbitrators along with their qualifications. Each of the carrier and shipper may submit recommendations to the Agency of names for a potential arbitrator, although the Agency is not bound by the list. Members of the Agency are ineligible to be arbitrators.
[33] A hearing is not required for all arbitrations.
[34] One of which was a recommendation to shorten the time allowed for the FOA process, which the Parliament of Canada adopted.

recommended its continuance.[35] Notably, the threat of use of the FOA process was identified as a major benefit to shippers. The FOA decisions are confidential and no information is available. However, it is generally understood that decisions have been rendered in favour of shippers as well as carriers.

The number of arbitrations (some of which are resolved commercially before the process is completed) is modest. Using data provided annually in the Canada Transportation Agency (CTA) (and predecessors) Annual Report, Montiero and Atkinson (2009)[36] indicate the modest number of applications:

- Between January 1988 and June 1996
  9 FOA applications – 2 decisions
    - Note that the FOA process was created in 1987 legislation.
- Between July 1996 and December 2005
  26 notices from shippers with the intention of filing
    - Note that the legislation was revised in 1996, hence the authors separated the two time periods.[37]
    - Of these, approximately half were withdrawn or settled before FOA
- In 2006-7
  8 cases referred to independent arbitrator

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[35] The most recent review made the following summary statement regarding FOA for rail transport in Canada: "The FOA provisions, introduced in 1987, allow a shipper dissatisfied with a rate or condition of service associated with a movement of goods to submit the matter for final offer arbitration. … **The Panel believes that the FOA provisions have two important hallmarks of effective economic regulation: First, the arbitration process encourages parties to reach commercial settlement of their disagreement by its all-or-nothing approach.** Second, the provisions require the arbitrator to assess whether the shipper has alternative, effective, adequate and competitive means of transporting goods, implying that where markets work, they should be left to work.

Some carriers suggested replacing FOA with commercial arbitration. This suggestion ignores the fact that FOA exists to provide relief to shippers that find themselves without alternative, effective, adequate and competitive means of transporting their goods. The Panel finds it difficult to believe that a commercial arbitration scheme would provide effective relief to a shipper in these circumstances. Railways claim that shippers that proceed with FOA are free to walk away if they are dissatisfied with the result. This argument ignores two points: First, shippers must undertake, as part of the application for FOA, to ship the goods in question in accordance with the arbitrator's decision. Second, since the arbitrator, when considering disputes in excess of $750,000, considers whether a shipper has alternative, effective, adequate and competitive means to transport goods, it is unlikely that a shipper would endure the complexity and expense of FOA in circumstances where competitive options are available. There are continued concerns about the complexity and expense of FOA. The Panel notes, however, that much of the complexity stems from the requirement that each side in an FOA know the other side's case (a requirement of natural justice) and from the value of rate disputes, which the Panel understands often exceeds $1 million. More simplicity in these matters could result in greater risk of inaccuracy and unfairness. On balance, the Panel is satisfied that the FOA provisions, including the new simplified process for lower-value disputes, adequately address the problem of carrier dominance and potential abuse in a way that is fair to both shippers and carriers. **Rail shippers have found FOA effective in obtaining relief, and the process is generally working well and as intended**." [emphasis added]

[36] Joseph Monteiro and Benjamin Atkinson (2009), "Final offer arbitration - does it provide shippers with more competitive rates?" Proceedings of the Canadian Transportation Research Forum, pp. 656-669. Authors are with Canada's Competition Bureau, although the paper qualifies that the views of the authors are not necessarily those of the Commission.

[37] The authors report other legislative changes affecting the FOA process and access to it were made in 2000 and 2008.

We have updated these figures using more recent CTA Annual Reports.

Year of Annual Report	Cases Referred to FOA
2013-14	2
2012-13	2
2011-12	No information in annual report
2010-11	1
2009-10	2

Some observations:

- In total, since the FOA provisions were created, there have been 50 applications, roughly 2 per year.
- Perhaps roughly half were settled or otherwise withdrawn, indicating that the parties reached a commercial agreement.
- To put these figures in context, when assessing the number of FOAs it must be kept in mind that rail (in Canada) is a sector where each carrier has thousands of customers and hundreds of thousands of rates for different shipments (commodity type, origin-destination). Airport use of FOA provisions should be expected to be much fewer as the scale of carrier-airport interactions is much lower.

Of particular importance for the issues discussed in the next section, is that FOA has been judged by shippers to be a special remedy, not to be used as a routine element of rate making with the carriers. Only a tiny fraction (under 1%) of rates are subject to the FOA process, although the threat of the FOA process may be a factor in a large number of shipper-carrier rate negotiations. Montiero and Atkinson summarise the views of Canada's Competition Bureau on FOAs:

> *"The Bureau was of the opinion that since the passage of the CT A, FOA has become the only effective tool available to captive shippers to provide relief from a monopoly rail carrier (with the exception of regulated interswitching). … The FOA process is effective because it is timely (30-day or 60-day processes), commercial as opposed to regulatory (i.e. it is not a proceeding before the Agency), and is unencumbered by statutory tests or barriers to relief. It is important that the current FOA process continue in its present form and additional tests should be avoided. It therefore recommended that the FOA provision remain intact as it currently stands."*[38]

[38] Monteiro and Atkinson, p. 10. Their source is Submission to the CT AR Regarding Rail Access and Related Issues by the Commissioner of Competition, October 6, 2000, p.10. The authors also summarise views of other parties.

They summarise the views expressed by the various stakeholders as follows:

> *"In sum, shippers, provincial governments and reports by other bodies have indicated that the FOA is effective in providing shippers with more competitive rates. The two major railways while agreeing prefer a more commercial oriented or market oriented approach to dispute resolution."*

5.6 Is an Arbitration Remedy Desirable?

In section 2.4, I identified that an information disclosure regime has potential to be a constraint on airport exercise of market power vis a vis fees charged to airline customers. However, I observed it was unlikely to be a constraint on the pricing actions for large gateway airports. The question then arises as to what additional remedy is necessary for the users of these airports. In this section, I turn to the issues regarding a potential arbitration remedy, specifically addressing claims by the Australia Productivity Commission regarding arbitration.

In its 2006 review of the light handed prices monitoring regime,[39] the APC discussed FOA as a potential remedy. Many air carriers recommended some provision be made for an arbitration remedy to supplement the price monitoring regime. Some of the airports also recommended in favour of such a remedy, while some recommended against. The APC summarised these views, then recommended against any arbitration remedy to supplement the prices monitoring regime. Here, the APCs reasons against an arbitration regime are reconsidered.

The APC first noted that "all airports" have dispute resolution processes in place.[40] However, the path ends in mediation, not arbitration and "mediation is almost always non-binding."[41] Key criticisms stated by the APC of arbitration as a pricing remedy include:

- The process takes an "absurdly long" time to resolve.[42]
- "it seems highly likely that such a system would come to be viewed by airlines in particular as the default option, effectively leading to a return to heavy-handed determination of charges and conditions for airport services, with all of its attendant costs."[43]

It also comments on the lack of transparency in arbitration processes. The APC seems to have based its conclusions on experiences in other regulated infrastructure sectors, with gas, electricity and telecommunications as the cited examples. Regarding the latter, the APC states that arbitration can be heavily used when dealing with disputes over access to existing facilities. It observes the service provisions in the three sectors is typically subject to price regulation or ACCC use of indicative prices hence the scope for negotiation is curtailed. It also points out that where services are relatively homogeneous the range of issues that are disputed are relatively narrow. This thinking led the APC to recommend against an airport arbitration process:

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[39] "Review of Price Regulation of Airport Services," Productivity Commission Inquiry Report, No. 40, December 2006.
[40] Ibid., p. 88.
[41] Ibid.
[42] Ibid., comment of Melbourne Airport.
[43] Ibid., p. 95.

"Recommendation 4.5
Neither an airport-specific arbitration regime, nor mandatory information disclosure requirements for airports, should be introduced at this time."

These arguments regarding arbitration strike us as being peculiar.

- Time required
  Arbitration processes can be time limited, either by policy or by legislation. The case of rail transport in Canada is a good example of an effective time limited process to resolve disputes. Costing in the rail sector is as complex or more complex than for airport services yet a 60 day process has proven to be effective. Rather than take length of an unconstrained process as a given, policy can be guided by specifying a time limit for the process. Arbitrations under provisions of the legislation or regulation would thus not have absurdly long processes.

- Default Option/Heavy Use
  The use of arbitration to resolve disputes is unlikely to become the default option for carrier-airport relationships. While the process can be time limited, it does have costs associated with it for both parties and like most arbitration processes (e.g., commercial contract disputes) is unlikely to be used for routine issues and only likely to be used where the difference between the parties is significant. Further, the process is more likely to be used one time to resolve an initial pricing dispute, with the arbitration decision itself guiding the parties for subsequent negotiations. This is not to say that an arbitration decision will never result in a subsequent arbitration but it is likely to remove such a choice for routine pricing matters.

  We also cite the evidence from Canada where over 25 years' experience with FOA for pricing disputes between infrastructure and service providers and their users/customers shows relatively modest use of the remedy. That the remedy has been used over time is indicative that the customers find it a useful remedy. That it is not used routinely is indicative that contrary to the APC's assumption, it is unlikely to become the default option for resolving carrier-airport pricing disputes.

- Narrow scope
  The APC several times cites that the homogenous nature of services or other price regulation will narrow the range of issues to be arbitrated. However, it is unclear why a narrow range of items to be disputed is a factor against use of an arbitration remedy. To the contrary, a narrowly focused dispute on rates and charges (and related terms and conditions) would seem to bode well for an arbitration process, especially a time limited process. A narrow issue is far more likely to be resolved by an arbitrator than one where the scope of issues is broad. A narrow scope of issues is almost ideally suited to an arbitration process. Whether the narrowness of the matter is due other regulations guiding the issues or to a simple commercial matter of price being the disputed item does not matter.

- Foundation contracts
  The APC also raises the issue of settling disputes on new infrastructure. Their argument here is very unclear. The claim is that these charges are less likely to be disputed than prices for use of existing infrastructure. It is unclear to us why this would be the case, but nevertheless all it means

is that the use of an arbitration remedy is less likely to be used for new infrastructure, something that is not a detriment to establishing the remedy.

5.7 Information disclosure and its effectiveness for New Zealand

The APC also recommended against mandatory information disclosure for airports.[44] The primary issue seems to be the challenge of defining a specific information disclosure requirement. The APC specifically cited comments by Air New Zealand to the APC that the New Zealand information disclosure regime is that it is "it may be difficult to draft requirements that actually assist the negotiation process. Moreover, at those airports which follow an 'open book' policy, even well-crafted provisions would seemingly add little value to negotiations."

Commentary on the effectiveness of information disclosure suggests that it has not operated to constrain monopoly pricing in New Zealand. As set out in section 1.1 above, the Commission's reports on the effectiveness of information disclosure found that it was not limiting excessive pricing at Wellington and Christchurch Airports. In respect of Auckland Airport, the Commission found that while information disclosure seemingly constrained Auckland Airport's pricing power, the airport was still targeting "above normal" returns.

A key factor limiting the effectiveness of information disclosure in New Zealand is the absence of an effective trigger mechanism for regulation. As described in section 2.4.1 above, the credibility of the threat of regulation is the key to its success, and in the absence of an effective trigger, the regulatory threat lacks credibility. In New Zealand, any increased level of regulation can only be imposed through legislative change, a relatively long and cumbersome process. This can be compared to the Australian position, where the regulatory authority has the ability to impose further regulation. However, as set out above, even the Australian mechanism has been criticised as not limiting the ability of airports to exercise market power.

Thus it seems information disclosure alone is not sufficient. New Zealand either needs to put a credible trigger mechanism for regulation into place, or to combine information disclosure with a negotiate/arbitrate mechanism.

5.8 Constraining the Exercise of Market Power by New Zealand Airports

The issue of market power of airports vis a vis large gateway airports was already discussed in Section 2.4. Here we note that in the case of New Zealand, the market power of the gateway airports is further enhanced by geography. Passengers have no practical airport alternative for international traffic, unlike nations in Europe, North America and even in some parts of Asia (e.g., Hong Kong vs. Guangzhou and Shenzhen). New Zealand's only two intercontinental airports (AKL and CHC) are on different islands with long and difficult drives/ferries, and WLG, which has a limited runway, is also an unacceptable driving distance.

As noted in section 5.2 above, the case of Australia shows that even where a credible trigger mechanism is in place, there can still be issues. The airports of Brisbane, Melbourne, Perth and Sydney still retain a

[44] Recommendation 4.5.

degree of market power that has policy implications. There is no reason to believe the situation would be any different in New Zealand, In fact, geography and the nature of New Zealand's airports suggests that the case would be similar, if not worse, in New Zealand – that airports would retain at least as much if not more market power than their Australian counterparts due to the long distance and added uncertainty of a ferry crossing.

A negotiate/arbitrate mechanism in addition to information disclosure would work well in New Zealand. New Zealand has well established judicial processes governing commercial relations and an orientation to market solutions and commercial decisions. Arbitration could take the place of a regulator, much like how Final Offer Arbitration can be used in Canada in lieu of regulatory determinations by the Canadian Transportation Agency. Moreover, given that both airlines and airports in New Zealand are large sophisticated parties, they are both well positioned to make a negotiate/arbitrate mechanism work.

The process can be timely. Timelines can be established in legislation to ensure the process cannot be needlessly drawn out. Since there is a cost to an arbitration process, there is incentive for both parties to resolve disputes through negotiation, and to fall back on arbitration only in cases where negotiations fail. Adopting a Final Offer Arbitration process often helps the parties to agree to terms, as the process incents both parties to develop reasonable positions. Thus the design of the negotiate/arbitrate mechanism itself can lead to negotiated commercial agreements – in preparing for the FOA the positions of the two parties sometimes comes close enough together that the parties are able to resolve the issue themselves without going through the whole arbitration hearing, or even before the formal hearing begins.

Information disclosure and a negotiate/arbitrate mechanism would offer a means of limiting the exercise of market power by airports without the government having to put in place a more onerous regulatory regime that would impose costs on airports, airlines and government. It is easy to implement and is effective in resolving disputes. It keeps the parties focused on commercially reasonable solutions in an effective and low-cost manner.

6 Conclusions

This chapter summarises the main conclusions of this report.

1. The report finds that the market power of airports in New Zealand is likely less for the non-gateway airports. Here, airlines may have some countervail powers by being able to reduce or withdraw air service.

2. However, there likely is considerable potential for the exercise of market power at the gateway airports. The threat of carrier reduction or withdrawal of service is likely much less as the greater scope of airline competition is likely to result in replacement of withdrawn service. As well, New Zealand's geography results in less competition between gateway airports than is the case in a number of overseas markets. Finally, the major carrier(s) face significant entry barriers (foreign ownership limits) to establishing air services at other airports as a supply response to unduly high airport charges.

3. Information disclosure is useful but unlikely to be able to constrain potential abuse of market power at New Zealand's gateway airports. Airport operators complying with information disclosure requirements, still have an ability to unilaterally impose price increases. The power of information disclosure as a light handed constraint on airport market power depends on the credibility of the threat of imposing regulation. Australia has a credible threat of reregulating its airports as it previously regulated these operators and continues to have legislation and regulations in place to quickly re-establish regulation. This is not the case for New Zealand.

4. Thus, New Zealand needs an additional constraint on the potential exercise of pricing market power by its gateway airports.

5. Final Offer Arbitration is a recommended remedy for New Zealand's gateway airports.

    a. It is a light handed remedy.

    b. It can be designed with a process that is time (and hence cost) limited.

    c. While it has much lower costs for carriers and airports than heavy handed or price cap regulation, it will have some costs and this will discourage airlines from making FOA the "default option" for carrier-airport negotiations on rates and charges.

6. For New Zealand's gateway airports, a regulatory design whereby one or all of them can be designated for use of the arbitration regime may increase the effectiveness of the existing information disclosure regime.

Appendix A: Airport Regulation by Jurisdiction

European Union

In order to establish "a common framework regulating the essential features of airport charges and the way they are set" the European Union issued Directive 2009/12/EC[45]. The Directive does not seek to impose a like regulatory regime on all Member States, but instead seeks to ensure common principles underlie airport charges throughout the Community.

The Directive specifies that charges should be non-discriminatory, transparent, and cost-related, and that regular (at least yearly) consultation with users be undertaken. In the case where multi-year agreements exist between airport and users, the consultation period shall be determined by agreement. The Directive specifies that changes to rates or rate structure should be agreed to by airport and users wherever possible. The Directive also calls for the nomination or establishment of an independent supervisory authority in order to ensure the correct application of the Directive, to deal with appeals by either party, and to review changes to charges. It allows for the authority to play a stronger role than overseeing consultation and remedy, including determination or approval of charges.

The principle of non-discrimination does not preclude the "modulation of airport charges for issues of public and general interest, including environmental issues. The criteria for such a modulation shall be relevant, objective and transparent[46].

The transparency principle (Article 7) specifies information to be provided by the airport. It includes the services/infrastructure provided in return for airport charges, methodology used to determine charges, the overall cost structure, revenues by charge and cost of services covered by them, public financing, forecasts, actual use of infrastructure and predicted outcome of major proposed investments.

Charges refer only to those that "are related to landing, take-off, lighting and parking of aircraft, and process of passenger and freight.[47] It does not apply to air navigation charges. Charges may be differentiated for particular services, terminals or parts of terminals (Article 10).

The Directive allows airports and users to reach a service level agreement, but does not require it (Article 9).

The Directive applies to all airports with annual traffic volumes in excess of five million and, in the case where a nation has no airport with that volume, the airport which has the highest volume.

The Directive is consistent with the recommendations of the International Civil Aviation Organization (ICAO). In fact, the Directive notes the ICAO Councils policy on airport charges include "the principles of

[45] European Union, "Directive 2009/12/EC of The European Parliament and of the Council of 11 March 2009 on Airport Charges", preamble, paragraph (2).
[46] European Union, "Directive 2009/12/EC of The European Parliament and of the Council of 11 March 2009 on Airport Charges", Article 3.
[47] European Union, "Directive 2009/12/EC of The European Parliament and of the Council of 11 March 2009 on Airport Charges", preamble, paragraph (4).

cost-relatedness, non-discrimination and an independent mechanism for economic regulation of airports[48].

The Directive seeks to ensure that a set of principles underlies the regulatory approach of all Member States. These principles are consistent with ICAO and with the approach already applied in many Member States. It does not seek to impose any particular regulatory regime, which allows nations to continue existing approaches, as long as the fundamental principles are abided by.

A key element in the Directive is the call for all Member States to nominate or establish an independent authority to supervise the correct application of the measures in the Directive. This body must be "legally distinct from and functionally independent of any airport managing body and air carrier[49].

One potential issue is the blanket application to any airport with over 5 million passengers. The Directive does not consider whether or not an airport has market power or is in a competitive environment based on its location and market. Thus the provisions may be imposed on an airport for no economically sound reason, given that regulation is normally only applied where there is a lack of competition and exercise of market power.

Another potential issue is that this is a Directive, not a Regulation. This provides more leeway for interpretation in how it is implemented by individual Member States. If States differ in their implementation of the Directive, the objective of a common framework may be compromised.

United Kingdom (UK)

Background

The UK was the first country to privatise its major airports and the first to regulate airport pricing using the price cap regulatory format. The basis for these innovations was the Airports Act of 1986.

Under the 1986 Act, economic regulation can be applied to airports in the UK whose turnover exceeds £1 million for two years (unless directly managed by the government). Any "qualifying" airport meeting this criteria may be "designated" for more intrusive economic regulation where it is found to have market power and be exploiting that power (whether through pricing, service quality or discrimination), and where existing UK or EU competition law is insufficient to address any such market abuses[50].

Only four airports in the UK were originally "designated" airports and, as such, were subject to price regulation. These airports were the three large London airports operated, originally, by the British Airports

[48] European Union, "Directive 2009/12/EC of The European Parliament and of the Council of 11 March 2009 on Airport Charges", preamble, paragraph (9).
[49] European Union, "Directive 2009/12/EC of The European Parliament and of the Council of 11 March 2009 on Airport Charges", Article 11, paragraph 3.
[50] Qualifying airports can only levy airport charges with the permission of the CAA. The CAA cannot refuse an application for permission nor does the level of charges require CAA approval. However, if the CAA establishes that the airport is abusing its market power or applying unreasonable discrimination, the CAA can revoke the airport's licence to levy airport charges, apply additional conditions or recommending designating the airport for economic regulation (the designation decision is made by the Secretary of State).

Authority Limited (BAA) - Heathrow, Gatwick and Stansted – and Manchester Airport[51]. Effective 2009, Manchester Airport was de-designated for regulatory purposes, following a consultation process.

It should be noted that non-designated airports are subject to a credible threat of reregulation in case they abuse their market power. In 1993 it was discussed whether the three Scottish BAA airports (Aberdeen, Edinburgh and Glasgow) should be regulated or not[52] and in 2000 the airport of Luton was criticised by the UK airline EasyJet for abusing its dominant market position[53]. In both cases the CAA decided against designating the airports for regulation and relied instead successfully on the threat of regulation[54].

Regulatory Format

Airport price controls in the UK are administered by the Economic Regulation Group of the UK Civil Aviation Authority (CAA) in conjunction with the Competition Commission (formerly the Monopolies and Mergers Commission). The CAA sets "conditions" on airport charges generally in the form of a price cap. The price caps are re-set every five years (a five year or quinquennennial review). Before an airport's price cap is modified, the CAA refers that matter to the Competition Commission for a review. The CAA's referral includes its initial views on the future price controls following a review and consultation process. The Competition Commission conducts an inquiry and makes a recommendation to the CAA. Then the CAA reviews the recommendation, conducts its own assessment and releases a proposal for consultation before making a final decision. The CAA is not required to accept any of the Competition Commission's recommendations. Airports do not have any rights of appeal, but may request a judicial review.

The price cap formula uses the RPI +/- X format using a single till formulation and is applied to revenue per passenger[55]. The determination of the X is based on a detailed account by account assessment (the CAA refers to this as a "building block" approach) of the airport's costs and revenues, forecast traffic levels, capital structure and investment needs, in combination with a consultation process involving airport users and other stakeholders. In the last few reviews, the regulatory structure has incorporated capital investment triggers so that the cost of certain capital projects can only be included in the price cap once there is a demonstrated need (e.g., traffic hits specified levels triggering the need for expansion) or where the airport has reached specified completion levels for these projects. As described in Section 4.4, the CAA has introduced a service quality regime at Gatwick and Heathrow whereby airlines receive a rebate if the airports do not meet service quality targets in areas such as security screening queue times, passenger seating, cleanliness, way-finding, flight information, baggage reclaim, transfer/transit times, etc.

While early price caps generally had negative X's, reflecting requirements for greater efficiency, some of the more recent price caps have been above the rate of inflation, particularly in regards to Heathrow,

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[51] The other BAA operated airports were not designated for regulation. Originally, this included Aberdeen, Glasgow International, Glasgow Prestwick (since sold by BAA in 1992) Edinburgh Airport (sold in April 2012) and Southampton Airport. In October 2012, the company changed its name to Heathrow Airport Holdings Limited.

[52] Starkie, D., "Regulating Airports and Airlines", in M.E. Beesley (Hrsg.), Regulating Utilities: The Way Forward, Institute of Economic Affairs, London, 1994, pages 37-55.

[53] UK Civil Aviation Authority, easyJet Application for Designation of Luton Airport, London.

[54] Wolf, H., Privatisierung im Flughafensektor. Eine ordnungspolitische Analyse, Berlin, Heidelberg, New York, Hongkong; Springer, 2003.

[55] Specifically, residual revenue after allowing for the contribution commercial and other non-regulated revenues.

reflecting capital requirements. For example, the price caps for the most recent quinquennial period, 2008-2013 (or 2009 to 2014 in the case of Stansted), were set as follows:[56]

- Heathrow: RPI + 7.5%
- Gatwick: RPI + 2.0%
- Stansted: RPI + 0% (2009-11), increasing to RPI+1.63% (2011 going forward).

Prior to the review for the 2008-13 price caps, the CAA reviewed the designation of Stansted and Manchester airports[57]. The CAA concluded that both airports should be de-designated for regulation on the basis that neither airport held significant market power and that existing UK and EU competition law was sufficient to correct potential abuses. They also concluded that price regulation may be distorting airport incentives by encouraging investment that is both too large and too early. Manchester Airport was de-designated, but the UK Department for Transport decided to continue regulation of Stansted Airport.

In previous reviews, the CAA has also explored the option of a dual till regulatory format.[58] The CAA found some merit in this format, particularly in regards to addressing congestion issues at Heathrow. However, such a change to the regulation was opposed by many airlines and by the Competition Commission, and so the CAA has continued to use single till.

BAA's Scottish airports at Glasgow, Edinburgh (prior to its 2012 sale) and Aberdeen were not designated for regulation, but are qualifying airports which could be subject to regulation if the CAA views they are exploiting their market power. However, BAA voluntarily capped revenue per passenger at Glasgow, Edinburgh (before its sale) and Aberdeen. This may be due in part to threat of designation by the UK government, as well as enhancing the commercial relationship between these airports and their airline customers. This suggests that the credible threat of regulation (credible because legislative authority was in place to implement regulation) played a part in constraining the private airport operator's behaviour, without the need to apply direct regulation.

Conclusions

The 2008-13 quinquennial period was the fifth such regulatory period since price cap regulation was introduced for UK airports. The review process for the sixth regulatory period (covering 2014-19) started in 2012. The regulatory format used in the UK has been criticised for its complexity: the reviews for each regulatory period have recently taken over two years to complete, which is both costly and time consuming. It is further complicated by the scope of CAA powers and their coordination with the UK Competition Commission and other government departments (e.g., the Secretary of State, not the CAA, ultimately decides which airports are designated for regulation).

Following various reviews, the UK government has put forward a new Civil Aviation Bill which would modify the role and powers of the CAA:

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[56] In 2011, the CAA extended the price caps for Heathrow and Gatwick to 2014.
[57] UK CAA, "De-designation of Manchester and Stansted airports: The CAA's advice to the Secretary of State", July 2007.
[58] UK CAA, "Economic Regulation of BAA London Airports (Heathrow, Gatwick and Stansted) 2003 – 2008" CAA Decision, February 2003.

- Replace the CAA's current multiple priorities with a primary focus on furthering passengers' interests.
- The CAA would have the power to designate airports, subject to specified criteria where the benefits of regulation outweigh the costs.
- A more flexible approach to licencing and regulation (e.g., removal of requirement for fixed five year periods).
- Removal of the referral of decisions to the Competition Commission.
- Power to apply financial penalties for up to 10% of airport turnover.
- A tiered approach to licencing and regulation based on airport size and market power, consistent with the EU Airport Charges Directive. Although not finalised, it is proposed that airports in Tier 1 would be those with substantial market power where regulatory intervention is warranted (such as Heathrow, Gatwick and Stansted currently), those in Tier 2 will be all other airports meeting the five million passengers per year threshold in the Airport Charges Directive (ACD), and Tier 3 would be airports with between one and five million annual passengers subject to existing conditions.[59]

Denmark

Background

Historically, the Copenhagen airports (both the primary airport at Katsrup and the secondary airport at Roskilde) were owned by the government and operated by the public sector Copenhagen Airports Authority under the Danish Ministry of Transport. In 1990, Copenhagen Airport A/S, a public company, took over ownership and operations at both Copenhagen airports. The Danish Government sold 25% of Copenhagen Airports A/S to private investors in 1994, another 24% in 1996 and a further 17% in 2000. When the third tranche was floated in 2000[60], a formal price cap was introduced. As the government could no longer control the company, price control via regulation was considered to be required, both to protect consumers and to provide more certainty to potential investors about airport charges in the future.

The regulatory framework that was established in 2000 was amended in January 2003. The new framework was made provisional until 2008 at which time it was reviewed and amended. The current framework was implemented on 19 December 2008.

Regulatory Format

Airport charges have to be approved by the Danish Civil Aviation Administration.[61] The statutory framework for payments for the use of a public aerodrome is set out in Section 71 of the Danish Air Navigation Act. The most recent set of tariff regulations were approved in March 2012.

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[59] House of Commons Library Standard Note SN5333, Aviation: airport regulation,

[60] As at December 31, 2011, the Danish state held 39.2% of the shares in Copenhagen Airports A/S.

[61] On 1 November, 2010, the Civil Aviation Administration was merged with the Danish Transport Authority (responsible for safety) under the latter's name. The role and responsibilities remain the same. Although the CAA's name has changed, the regulations still refer to the old name, so that is used in the following description of the regulatory regime.

The regulatory format involves a mixed approach offering two methods by which aeronautical charges can be determined at Copenhagen airports: by negotiation and by regulation. Under negotiation, the charges and the term of application are both subject to negotiation. Under regulation, annual revenue caps are set for the coming four year regulatory period.

Negotiation. Well in advance of the commencement of a new price cap, Copenhagen Airports is obligated to negotiate with the airlines for the purpose of entering into an agreement covering the next four year period. The price structure is determined through negotiations between Copenhagen Airports and its regular airline users, or the organisations representing them. Regular users are those carriers with a physical establishment at the airport or over a period of at least eight months have contributed either more than 20% of airport revenues or represented more than 20% of the airports IFR operations. Airlines carrying at least 5% of the passengers, or operating at least 5% of the total take-offs may also participate. The Civil Aviation Administration plays an observer role, and can act as a mediator.

If the parties do not reach an agreement by September 1st of the year prior to the next four year regulatory period, the aeronautical price cap will be determined by regulation.

Copenhagen Airports' current schedule of aeronautical charges at Katsrup is in force until 31 March 2015. It was reached via a five and a half year agreement with the airlines signed in September 2009. The agreed schedule of charges remains generally unchanged until 31 March 2011, after which charges are increased by the amount of any increase in the Danish Net CPI plus 1% per year until 31 March 2015.

In August 2010, the airport and airlines agreed to differentiated traffic charges. Charges at the GO low-cost facility were reduced by about 35% under this agreement.

Regulation. If negotiations are unsuccessful, the Danish Civil Aviation Administration will set annual revenue caps for each of the years of the regulatory period. In such a situation, Copenhagen Airports is to submit a proposal for a new schedule of charges, and the Civil Aviation Authority will engage in consultation with the airport users. The annual revenue caps for the aeronautical facilities and services is determined on a dual till basis, with the cap comprised the sum of:

- A cost cap to cover operating costs adjusted for any requirements for efficiency improvements as a fixed percentage of the cost cap;
- A cost cap to cover depreciation and impairment of non-current assets;
- An amount for return on equity and debt based on the cost of capital using a Capital Asset Pricing Model;
- A transfer of additional return from the commercial area, which is deducted from the revenue cap. This turns the dual till into a mixed till.

The transfer of additional returns from the commercial area is designed to maintain charges relative to comparable airports and to promote aeronautical activity. A minimum of 10% of the additional return and a maximum of 50% of the return will be applied.

The first schedule of fees for the period 1 April 2009 to 31 March 2010 was based on a revenue cap set by the Civil Aviation Administration under the transitional terms of the December 2008 regulation. It allowed an increase of 4.2% in charges.

Conclusions

Price regulation was introduced to the Copenhagen airports following their partial privatisation. The regulatory regime is arguably more light-handed than, say, the UK, in that it encourages negotiation, while guarding against potential market power with the threat of regulation. This threat is credible as it has been developed in detail and has been used in the past (although the regulator is not independent which may reduce the credibility of the threat). The negotiations allow a more flexible adjustment of charges and may include negotiations on issues such as the supply and quality of services and differentiation of charges.

Ireland

Background

The Commission for Aviation Regulation (established by the Aviation Regulation Act 2001) was charged with the determination of the maximum level of airport charges at Irish airports with over one million passengers per annum. Prior to 2004, this resulted in three airports, (Dublin, Cork and Shannon), being subject to price regulation. In 2004, the State Airports Act was passed, establishing the Dublin, Cork, and Shannon Airport Authorities, and removing Cork and Shannon airports from regulation.

Regulatory Format

Aeronautical charges at Dublin Airport are regulated using a price cap. Charges include charges for taking off, landing and parking aircraft, for the use of air bridges, for arriving and departing passengers and for the transportation of cargo.

The 2004 State Airports Act seeks the efficient and effective use of all resources by the airport authority and allows for a reasonable rate of return on investment capital in the context of sustainable and financially viable operation of the airport. The policy instrument used to determine the maximum airport charges is the CPI-X price cap. The price cap uses a single till principle, but the Commission has indicated the possibility of a dual till approach in the future. To date, however, the Commission has "not been persuaded to adopt a dual till approach to price-cap regulation at Dublin Airport[62]. However, the Commission is in the process of amending the rules to increase the incentives of airlines to engage in new capital expenditure proposals. If airlines reject large individual non-aeronautical investments (e.g., a new hotel) the Commission may consider that the project can go ahead, but that all hotel (for example) commercial activities will no longer be within the single till.

The Commission is independent but must comply with recommendations made by the Minister of Transport. For example, in the latest determination of the price cap in 2009, the Minister provided direction to ensure that the Dublin Airport Authority's (DAA) financial viability is protected in order to implement government policy on:[63]

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[62] Commission for Aviation Regulation, "Future Investments and the Regulatory Till", Commission Paper 1/2012, 26 April 2012.
[63] Letter from the Minister of Transport to the Commissioner for Aviation Regulation, 27 October 2009.

- the role of Dublin Airport as an international gateway for Ireland;
- promotion of direct international air links to key world markets, such as new and fast-developing markets in the Far East;
- Develop the new Terminal 2 as quickly as possible;
- the operation of DAA on a commercial basis without recourse to the State, and with access to cost efficient debt financing in the private sector.

The Ministerial Direction was received after the draft price cap determination had been made, so the Commission reviewed its determination in light of the four elements highlighted by the Minister. It concluded that it was indeed in compliance with the Direction in making its price cap determination.

The X factor of the price cap was set to -2.5% in 2009, with an effective average revenue per passenger yielded by way of airport charges not to exceed €9.32 in 2010, €10.44 in 2011, €10.23 in 2012, €10.03 in 2013 and €9.83 in 2014[64].

The maximum price cap that can be realised by the DAA is subject to service quality targets[65]. A Quality of Service Adjustment is made to the price cap that could result in a lowering of the annual price cap by up to 4.5% in the extreme event that the DAA fails to meet all of the quality targets for all four quarters of any given year. There are 12 service measures that can impact the price cap level. They are security passenger search time, out-bound and in-bound baggage system availability, ease of way-finding, flight information screens, cleanliness of terminal, cleanliness of washrooms, comfort of waiting/gate area, courtesy/helpfulness of airport staff, courtesy/helpfulness of security staff, overall satisfaction of all passengers and communication/telecom/e-facilities. Each measure has a specific target and weight in the determination of quality of service.

Conclusions

Ireland is an example where the regulated airport is fully publicly owned. DAA is entirely state-owned and the Irish government have not indicated any firm plans to privatise the authority. However, the airport is authorised to operate in a fully commercial manner.

The Commission has examined the use of differential and peak-load pricing to fund capital investment programs (such as construction of Terminal 2 at Dublin Airport). This was prompted by an appeal by Ryanair which, in part, argued that passenger and airlines not requiring the capacity expansion should be required to pay for it. However, most other airlines at Dublin Airport opposed the measure, and the Commission, while agreeing "with the general arguments Ryanair makes concerning the merits of differential pricing" nevertheless decided against mandating differential pricing.[66] The Commission

[64] These changes were based on Terminal 2 being operationally ready by 1 November 2010. The cap was lower if Terminal 2 was not operationally ready.
[65] This was introduced in the process leading to the 2009 price cap determination. It was not a part of the previous determination in 2005, as the Commission did not have time to deal with it. It did indicate in 2005, however, that it intended to monitor quality of service.
[66] Commission for Aviation Regulation, “Decision of the Commission further to Referral by the 2010 Aviation Appeal Panel”, Commission Paper 2/2010, 30 July 2010.

observes that Dublin Airport has already differentiated prices for different qualities and encourages parties to agree on differential pricing, but abstains from micro management.

Discussion regarding the single vs. dual till approach to price caps continues. Commission Paper 4/2010 entitled "Defining the Regulatory Till" began a review the Commission committed to during the 2009 determination process. Responses were received from ACI Europe, Aer Lingus, the DAA, and IATA. Aer Lingus and IATA were in favour of the single till approach; the DAA and ACI favoured regulating only those areas requiring where an airport has market power, which a dual till approach would facilitate. The Commission responded with another Paper (CO 1/2012) which indicated that it was still not convinced to move to a dual till approach. This drew responses from the same four stakeholders. Consideration is still underway.

Germany

Background

Starting in the late 1990s, Germany began a program to partially privatise its airports.[67] To date, five international airports have been part-privatised, namely, Düsseldorf, Hamburg, Frankfurt, Hanover, and Saarbrücken. Some regional airports are also partially or fully privatised.

Although federal aeronautical powers reside in the Ministry of Transport, administration and regulation are significantly devolved to each of the 16 German States.[68] The States are required to establish competent authorities to regulate airports in their jurisdiction. As a result of this, numerous regulatory approaches have developed in Germany, including price caps, cost-based regulation and regulation by contract. These are described below.

Regulatory Format: Hamburg Airport

For Hamburg, a public contract restricting price increases was struck between the airport operator and the Ministry of Economic Affairs of Hamburg that replaced the cost-plus approach that had previously been used. The new price control mechanism is a dual till price cap based on revenue yield per passenger. The X is determined by projected growth of productivity with no consideration for rate of return. Since its initiation in 2000, the price cap has been fixed at CPI – 2 unless passenger growth triggers increases in X. A sliding scale was adopted such that if traffic grows at a rate greater than 3% per annum, for every additional percent growth, X increases by 0.5 percent.[69] There was initially no provision for the case where traffic declines. The contract was initially put into place in 2000 and was renewed in January 2005 and again in January 2010.

The airlines, though heavily involved in the discussions leading to the agreement, were not actually parties to the agreement. Due to their concerns about major investments and changes to the structure of

[67] The federal government originally announce its intention to privatise airports in 1982.

[68] Although Berlin and Brandenburg are separate city-states within Germany, they have a common regional transportation authority, resulting in 15 different airport governing authorities.

[69] Niemeier, H.-M., "Regulation of Airports: The Case of Hamburg Airport – a View from the Perspective of Regional Policy", Journal of Air Transport Management, Volume 8, pages 37-48.

charges, the airport and Ministry agreed to the establishment of a Price Cap Review Board that included airline representation. The Board meets regularly and has been granted power to amend the agreement as necessary. This power was used when traffic dropped dramatically following the 9/11 terrorist attack. With no provision for traffic declines in the formula, subsequent traffic recovery would have led to abnormally high X-factor, which would have reduced airport revenues significantly. The parties agreed to temporarily remove the sliding scale.[70] In addition to a price cap, the airport must attain the quality of service targets related to the availability of service and facilities and punctuality.

Regulatory Format: Frankfurt, Dusseldorf and Hannover

Both Frankfurt and Dusseldorf use long term revenue sharing agreements with their airline customers. These are embedded into contracts between the airports and their relevant regulator or state authority. In case of disagreement, the charges are fixed according to cost based regulation.

At Frankfurt Airport, the airport operator has entered into five-year contracts with airlines. The first agreement was signed in 2002. Airlines agreed to growth in airport charges that varies on a sliding scale, inversely with passenger traffic development. If growth in passenger traffic exceeds expectations, permitted growth in airport charges will be lowered. Upon falling below the expected passenger growth by more than 1.5%, the charges will be increased in the following year by one-third of the resulting shortfall. Upon falling below the zero growth line of the previous year, there will be no further compensation. The airport retains 67% of the risk in development of passenger demand while airlines retain the remaining 33%. A review board with representatives from the airport, airlines, and local government meet regularly to provide consultation on the contract.

When the first agreement expired at the end of 2006, airport and airlines could not reach an agreement. This may have been related to the uncertainty over significant investments planned at the airport. A new two-year agreement was reached in December 2009 to cover 2010 (charges to rise by 4% in July and 3% in October) and 2011 (charges to rise by 3% in July and 2.5% in October). The agreement was contingent on Fraport and the airlines reaching an agreement to cover the years 2012-2015 by 21 February 2010. The parties were successful, and an agreement was reached that allowed charges to rise by 2.9% annually from 2012 to 2015. The agreement retained the provision whereby if passenger volumes exceed forecasts, the airlines would be reimbursed one-third of the additional revenue.

Dusseldorf, Hannover and initially Frankfurt also used sliding scale adjustments to their airport charges for a limited time, in agreement with the airlines. For example, Dusseldorf has an agreement which specifies a maximum allowable revenue yield (per passenger) within certain traffic bounds (14.3 to 17.0 million passengers in the 2004 agreement). Increases in traffic above these bounds result in the maximum revenue yield dropping, while declines below these bounds result in the maximum allowable yield increasing. These agreements could not be extended in the years following the crisis in 2007 as the traditional cost based approach offered higher charges for the airport.

[70] Littlechild, Stephen C., “German airport regulation: framework agreements, civil law and the EU Directive”, 9 October 2010.

Regulatory Format: Other Airports

The other part-privatised airport and many public airports in Germany are subject to cost-based regulation. This regulation was traditionally practised on a single till basis, but has been change more recently to a dual till.

Conclusions

Both the price cap approach at Hamburg and the contractual approach at Frankfurt, Dusseldorf and Hannover, incorporated sliding-scales which allowed revenues sharing between the airline and airport and prevented airports absorbing all the windfall profits in situations where traffic increases significantly beyond the forecasts. The contractual approaches in Düsseldorf and Hannover and to a lesser degree in Frankfurt do not offer a stable conflict resolution mechanism in times of fluctuating demand.

France

Background

Historically three categories of airports were distinguished in France for regulatory purposes: Aéroports de Paris (ADP), major regional airports and local airports. Each of these categories has been subject to differing treatment.

Liberalization of airports began around 2000. By 2004, all government owned airports were devolved to local authorities and in 2006, ADP was partially privatised. Different regulatory policies were developed for the larger airports. In April 2005, Law 2005-357 was enacted and changed airport policy in France, primarily by moving from a cost-plus to a price cap economic oversight model. This was implemented through five-year regulatory contracts between the Government and airport operators

Regulatory Format

Traditionally, airport price regulation was handled by the General Directorate for Civil Aviation and the General Directorate for Competition Policy, Consumer Affairs and Fraud Control. They calculated the level of airport charges and fees on an annual cost-plus basis.

With Law 2005-327, the airport signs a 5 year contract with the government that defines a price-cap formula and uses the single till format. This cap incorporates assumptions about capital expenditure, quality and passenger growth through a sliding scale mechanism[71]. In case the thirteen quality indicators are not met, fees have to be lowered. Similar if the investment program of €2.5 Billion for the first regulatory period will not be delivered charges will be reduced. While this is somewhat of a process of

[71] In 2009 the decrease in traffic would have allowed ADP to increase charges by ten per cent. Naturally this was opposed by airlines so strongly that in the end ADP decided to freeze charges and not to price up to the cap.

negotiation, and involves a review process including non-public user consultation[72], the final determination is made by the government[73].

The first contract was signed by ADP in 2006 for the period from 2006 – 2010, allowing a maximum increase of 3.25% annually plus inflation. The most recent contract, signed by ADP in 2010 for the 2011 – 2015 period, allowed a maximum increase of 1.38% annually plus inflation. This contract represented a move to an "adjusted single till approach" that would leave non-aeronautical real estate revenues unregulated.

Price cap regulation does not regulate the price structure. It sets incentives to rebalance the historically determined price structure to increase traffic, revenues and profits. These incentives might be reduced with a sliding scale as it guarantees a stable flow of revenues. ADP has so far not restructured the level and structure of charges of Charles de Gaulle International Airport and Orly International Airport. Both pricing structures have been largely unchanged although this implies a loss of traffic and revenues at Charles de Gaulle[74].

The first major contract signed by a regional airport (Toulouse-Blagnac) was completed in 2009. This contract allowed a maximum charge increase of 2.50% plus inflation for the first year, 1.00% for the second year and 1.90% for 2011 – 2013. Other regional airports are still undergoing the process of forming separate companies and negotiating regulatory contracts with the government of France.

Conclusions

Unlike other European governments (for example Germany) the French government reformed regulation prior to privatisation, but France did not create an independent regulatory authority. The government of France regulates the airport while still maintaining a shareholding in the airports. For example, the government held 52% of ADP in 2011[75].

Austria

Background

Austria was the second country in Europe after the UK to apply price cap regulation to a privatised airport. Aeronautical prices are regulated at Vienna Airport; Landing, passenger, transfer, parking and ramp charges are all levied at the airport.

Regulatory Format

The Austrian Civil Aviation Authority (ACAA), an autonomous authority, regulates Vienna Airport. Initially it was not mandatory that airlines be consulted, but this was changed in 2001 by the ACAA. Consultation is

[72] In 2006 a commission was established. Members are Air France, Corsair, British Airways, Fedex, organisations of airlines and employees: CSTA (chambre syndical du transport aérien), SCARA (syndicat des compagnies aériennes autonomes), l'association des représentants de compagnies aériennes en France, l'IATA (international air transport association), FNAM (fédération nationale de l'aviation marchande) and ADP - directors.

[73] Case Study: France, Faculdade de Economia da Universidade do Porto, Rua Dr. Roberto Frias Source: www.fep.up.pt

[74] Niemeier, H.M., Forsyth, P., Müller, J., & Wiese, H., "Regulating Paris Airports- An Economic Assessment", Working Paper.

[75] Registration Document 2011, Aéroports de Paris, April 2012.

not open to the public and no reports are published. The original price cap formula was set in 1994 for three years and has been in place since that time.

The price cap on airport charges at Vienna Airport uses the dual till model. The price cap is applied to a tariff basket, not a per passenger revenue yield (See Section 4.2 for discussion on the distinction between tariff baskets and revenue yields). The price cap formula has incorporated a sliding scale mechanism based on the rate of traffic growth, as follows:

% Price Increase = -0.35 x %Traffic Increase + Inflation +0.5%

In the case of negative traffic growth, the cap is set to inflation plus 0.5%. The price cap formula does not include a term for productivity gains and in the major revision of 2001 the price cap was set on the existing level of charges without correcting the asset base.

Conclusions

Like the UK and Ireland, Austria established an independent airport regulator for its airports (airports other than Vienna are regulated on a cost-based approach). However, the mandate for the regulator is vague. The legislation states that the authority should regulate so that the airports "shall be economically feasible".

Australia

Background

During 1997 and 1998, the Australian government privatised all but five of the country's federally owned and operated airports including Brisbane, Melbourne, Perth, Adelaide, Alice Springs, Canberra, Coolangata (Gold Coast), Darwin, Hobart, Launceston and Townsville. The sale of the Sydney Airports Corporation Limited (comprising Sydney Kingsford Smith Airport, three other Sydney Basin airports and Essendon) was delayed until July 2002 due to planning and environmental issues. The airports are now under pure private sector (for profit) operation on 50-year leases (with the option of a 49-year extension) from the federal government.

Initial Regulatory Format: Price Cap

For the first five years after privatisation, eleven of the privatised airports in Australia were subject to price cap (CPI-X) regulation on their aeronautical charges by the Australian Consumer and Competition Commission (ACCC).[76] Aeronautical charges included those for use of aircraft movement and passenger processing facilities and activities. A dual till price cap regulation was implemented, based on a tariff basket approach. Authority for regulating airport charges is contained in the Prices Surveillance Act of 1983. The aeronautical price reduction factors (the X's) were set by the government during the airport sale process (rather than determined by the regulator). The price caps varied across airports and were based on expectation of productivity improvements in the airport operation. Operators could seek

[76] Access arrangements, information disclosure and quality of service monitoring were regulated as well. The quality monitoring was seen as complementary to the price controls.

approval from the ACCC for increases in charges for necessary and new infrastructure investments, subject to support from principal users.

Change to Prices Monitoring (Trigger Regulation)

The regulatory regime applied to prices at these eleven Australian airports changed on 1 July 2002, following a review by the Australian Productivity Commission of the first five years of experience with airport price cap regulation. As a result of this review, direct price cap regulation was revoked. This was replaced by an industry-specific airport price-monitoring regime for a probationary period of five years. The government reserved the right to re-impose price regulation on its own discretion, and thus the active price regulation regime was replaced with trigger regulation. The Productivity Commission's reasons for moving away from price cap regulation was that it provided weak investment incentives, resulted in profit volatility for the airports, and was costly to administer.

As of 1 July 2002, the newly privatised Sydney Kingsford Smith Airport was designated for price cap regulation on aeronautical services, but only for regional air services. Regional air services are defined as regular public transport air services operating wholly within the State of New South Wales. All other aeronautical services at Sydney Kingsford Smith were subject to price surveillance and the ACCC reviewed their price notifications. Again, the ACCC has reserved the right to re-impose direct price regulation in the future.

After July 2002, the new role of the ACCC Aviation Group was to undertake formal monitoring of prices, costs and profits of aeronautical services and aeronautical related services. The airports subject to ACCC monitoring since 1 July 2002 include Brisbane, Melbourne, Perth, Sydney Kingsford Smith, Adelaide, Canberra and Darwin. The ACCC undertook formal monitoring of certain airport services which were not covered by price caps but where airport operators could be expected to exert significant market power. Examples of these types of services include charges for the services of check-in counters, aircraft maintenance facilities, aircraft refuelling facilities, vehicle access charges and car parking facilities. The ACCC had monitoring power to collect information on costs, profits and prices and to report publicly on the results of its findings.

In 2006, a Productivity Commission review of the five year price-regulation approach was undertaken to determine the need for future price regulation. It was found that the new trigger regulation approach was generally desirable as it tended to enhance incentives to generate necessary investments and improve productivity performance, while maintaining modest compliance costs.

In 2012, the Productivity Commission undertook another review of the airport economic regulation. The goals of this inquiry were to examine the effectiveness of the current monitoring regime and to determine whether new regulatory arrangements were needed. It should be noted that price regulation for regional air services into and out of Sydney Airports and the second tier self-administered airports were not included within the scope of this inquiry[77].

While the 2012 inquiry found that while there was evidence of market power at some airports, Australian airports had relatively low charges and costs, and a good record on investments. It also found that while airlines had maintained that airports adopt 'take it or leave it' negotiation stances and some failed to

[77] Australian Government Productivity Commission, "Economic Regulation of Airport Services", Inquiry Report No. 57, 14 December 2011, page XXIV.

provide adequate information, no party sought a return to regulatory price setting, given past experience with its associated costs.

Therefore, it recommended the continuation of the price monitoring (trigger regulation) approach with some minor modifications. The inquiry report contained recommendations for improving and strengthening the existing regulatory system and found the "… current situation of 'passive' inaction after the ACCC raises concerns in its monitoring reports unsatisfactory. There is a need to make the current system more active".[78]

The Productivity Commission proposed a "show cause" mechanism where the ACCC may identify an airport of concern. This airport would then be given the opportunity to "show cause" as to why its conduct should not be subject to a regulatory inquiry. Under this new proposed approach, the ACCC may proceed with the inquiry if not satisfied with the airport's response.

The inquiry recommended that price monitoring should continue at Brisbane, Melbourne, Perth and Sydney airports and that Adelaide airport should be removed from the price monitoring regime and place in the "Tier 2" self-administered monitoring regime.

Conclusions

The direct price cap regulation of Australian airports was a temporary measure. After gaining experience in the initial five years, direct regulation was replaced with trigger regulation at all but the largest airport, Sydney. At Sydney, direct regulation was confined to regional air services, with other services being subject to trigger regulation. Continuation of this regime, with some possible adjustments, continues to be the recommendation from the Productivity Commission in their most recent inquiry.

New Zealand[79]

Background

New Zealand's Airport Authorities Act 1966 gives airport authorities the power to set charges as they see fit. It does, however, require airport authorities to consult with every "substantial customer" (defined as anyone having paid an amount to the airport of at least 5% of airport revenues) when fixing or amending charges. Even if charges are not fixed or amended for an extended period, consultations have to take place at least once every five years. Consultation is also required for any planned capital expenditures where the investment amount would exceed 20% of the value of the existing assets.[80] The Act also has provisions for regulations governing disclosure of financial information, and the form that disclosure takes.

The *Airport Authorities (Airport Companies Information Disclosure) Regulations 1999* provided additional direction on what information has to be disclosed and when. Information to be disclosed covers only

[78] Australian Government Productivity Commission, "Economic Regulation of Airport Services", Inquiry Report No. 57, 14 December 2011, page XXXV

[79] We recognize that the current report deals with potential changes in regulation of airports in New Zealand. We decided to include the section on New Zealand from the ACI-World report for completeness of the coverage of that report.

[80] Assets refer to those related to airfield activities, aircraft and freight activities and specified passenger terminal activities.

identified airport activities, which include airfield, aircraft and freight, and specified passenger terminal activities.

Amendments to the Act in 2008 included a revised information disclosure regime, added a more prescriptive input methodology, and transferred the regulatory authority from the Ministry of Transport to the Commerce Commission.

With the 2008 amendments, the airports of Auckland, Wellington and Christchurch are now also subject to the Commerce Act, 1986[81]. This Act preserved the requirement for information disclosure, provided for a transition period, and mandated a review of the new regime as soon as any new price was set. This review was triggered and the preliminary report of the Commerce Commission of the review of Wellington was released on 2 November 2012.[82] Submissions on the draft report are due by 30 November 2012, cross examinations are due by 12 December 2012, and the Commission intends to finalize the report by 21 December 2012.

Regulatory Format

The purpose of the Commerce Act is to promote outcomes in regulated industries that are consistent with outcomes produced in competitive markets. This includes innovation and investment, improved efficiency and the provision of services of a quality that reflects consumer demands, the sharing of efficiency gains with consumers, through lower prices, and a limited ability to extract excessive profits.

To achieve this, New Zealand has adopted a light-handed approach, sometimes referred to as "trigger" regulation. Currently, information disclosure and consultation is all that is required of the airport authorities. The Commerce Act, however, has provision for the introduction of additional forms of regulation following a formal inquiry by the Commission into the need for regulation and what form that regulation should take. Such an inquiry can be conducted upon request by the Minister or on the Commission's own initiative.[83] The regulatory forms provided for in the Act include one or more of three options: information disclosure (already in place); negotiation/arbitration; and price/quality regulation.

The price/quality regulation can take two forms: a default/customised price quality regulation that applies to all regulated suppliers (with provision for suppliers to apply for an individual customised price-quality path); or a price/quality regulation that applies to an individual supplier. In either case, the regulation must specify one or both of the maximum price(s) or maximum revenue. Provisions are made for the regulation to include incentives such as penalties for failure to meet the required quality standards, rewards for meeting or exceeding the required quality standards, consumer compensation schemes, and reporting requirements. The Act gives the Commission the power to establish quality standards in any way it considers appropriate. The ability to impose regulation if an airport should abuse the market power it holds is intended to curb the incentive to abuse market power.[84]

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[81] Auckland and Wellington are partially privatised while Christchurch is fully government-owned. All three airports are operated on a commercial basis.

[82] Auckland and Christchurch will be subjects of separate reports.

[83] The Commission, however, cannot impose this regulation itself. If an inquiry leads the Commission to conclude regulation is required it makes a recommendation to the Minister, who in turn decides whether or not to make a recommendation to the Governor-General. Upon an Order in Council, the regulation would be established.

[84] The countervailing power of airlines is also expected to limit abuse of market power by airports.

In considering whether or not to impose additional regulations, the Commission must quantify material effects on allocative, productive and dynamic efficiencies, quantify distributional and welfare consequences on suppliers and consumers, and assess the direct and indirect costs and risks of any type of regulation, including administrative and compliance costs, transaction costs and spill-over effects.

The regulatory period is set at five years, though this can be reduced if the Commission considers that it would better meet the purposes of the Act. The period, however, cannot be less than four years.

Conclusion

The Commerce Commission is currently reviewing the effectiveness of the disclosure provisions in promoting the purposes of the Act. The draft findings are that the information disclosure regulation is effective in promoting quality of service and pricing efficiency at Wellington airport.[85] The Commission concludes, however, that information disclosure has not been effective in limiting Wellington Airport's ability to extract excessive profits. It considers Wellington's targeted cost of capital to exceed that which would be expected if the airport were subject to workable competition. The Commission was unable to reach a conclusion on the effectiveness of the information disclosure regulation on operational expenditures, investment, and sharing of efficiency gains either because of mixed evidence (operational expenditures) or because it is too early to tell (investment and sharing of gains).

A key issue in considering whether to implement further regulation is the requirement to consider the costs and risks of additional regulation. The legislators clearly recognised that regulation can have unintended effects related to efficiencies, distributional impacts, and costs.

India

Background

Until relatively recently, all the major airports in India were managed by the state institution Airport Authority of India (AAI). However, in the last decades, India has introduced a program of privatisation to some of its airports. These have taken the form of public private partnerships with the state retaining a minority holding in the airport. The first example was a newly built airport in Cochin, opened in 1999, and followed by two greenfield Build-Operate-Transfer (BOT) airports in Bangalore and Hyderabad (both opened in 2004). Finally, India's two largest airports in Delhi and Mumbai were privatised in 2006. In all cases, the state (either the AAI, local government or both) retained a 26% share in the airport, with a mix of private airport investors (largely foreign) the remaining 74%.[86]

As a result of these privatisations, the Indian government established the Airport Economic Regulatory Authority (AERA), under the Airports Economic Regulatory Authority of India Act, 2008. The AERA was set up as an independent regulator responsible for the regulation of user charges and airport quality requirements, and accountable to parliament. AERA regulates 14 airports out of 89 operational civil

[85] It also included innovation as being effectively promoted, although the impact on this by the information disclosure regulation has been limited. As innovation levels are deemed to be appropriate, this issue is not of concern to the Commission.
[86] Source: Graham, Anne, *Managing Airports: An international perspective*, Elsevier Ltd., 2008.

airports with a passenger throughput of more than 1.5 million, including some which are still fully publically owned.

Regulatory Format

The Act establishing AERA did not specify the regulatory format, providing AERA the flexibility to establish the format. Following an extensive review process, the AERA spelled out its approach to regulation in Order No. 13/2010-11, dated 12 January 2011. The AERA has adopted price cap regulation, using a hybrid till for Delhi and Mumbai and single till for other airports.[87] The guidelines do indicate, however, that the operator shall be allowed to retain any upside in revenue from services other than aeronautical services compared to forecast revenues.

The timeframe is a five-year period with an annual compliance process. The initial yield per passenger is determined by AERA under its tariff determination process, and subsequent to that initial determination, it will review and approve detailed annual tariff proposals from the airport operators. At the end of each year a compliance statement is to be provided by each operator which identifies any under or over-recovery, and corrections are made in subsequent years.

The yield per passenger is the aggregate revenue requirement divided by forecast volume. Aggregate revenue requirement consists of a fair rate of return and depreciation of the Regulatory Asset Base plus operating and maintenance expenditures plus taxation less revenues from services other than aeronautical services.

AERA approach to price cap is very much a cost based (i.e., hybrid) approach which incorporates detailed analysis of operating and capital costs and has built into it a calculation of the "fair" rate of return for the airport. AERA estimates a fair rate of return using a weighted average cost of capital approach to determine the nominal post-tax cost of capital after taking into account assumptions regarding inflation. The Regulatory Asset Base (RAB) includes all fixed assets of the airport operator, though it may exclude assets that are not related to airport services and assets that do not derive any commercial advantage from the airport. The calculation of the initial RAB takes into account the original value of fixed assets, accumulated depreciation, accumulated capital grants, subsidies or user contributions and adjusts for value of land excluded from the scope of the RAB.

AERA requires specific service quality parameters to be measured at major airports and will consider reduced tariffs in subsequent years if the operator does not meet the specified performance benchmarks.

Conclusions

India is one of only a few countries in Asia that have established price cap regulation. An independent regulator has been established, responsible for regulating both private (and part-private) and public airports. AERA has indicated that it considers even government owned/operated airports capable of exploiting market power, and views that the application of incentive regulation will improve performance in such cases.

[87] At Delhi and Mumbai, 30% of non-aeronautical revenues are included in the aeronautical till.

Mexico

Background

Mexico began to partially privatize three groupings of airports in 1995 with the passage of the Airports Law. Initially four groupings were established that were open to a degree of private investment. The groupings were roughly based on geography and each included an airport serving at least 5 million passengers.[88] The initial plan was for the government to retain an 85% ownership share, with the remainder offered to a "strategic partner" which had to include Mexican interests. Only three of the groupings resulted in concession agreements – for internal reasons the government did not proceed with the privatization of the Mexico City International Airport. After the initial concession agreements were reached with the Southeast Airport group, the Pacific Airport Group and the Central North Airport Group, the Mexican government eventually sold its remaining holdings in all three groups.

The Airports Law empowered the Ministry of Communication and Transportation to establish price regulations if the Competition Commission ruled that there was not a competitive market. In 1999, such a determination was made and a Rate Regulation was added to the concession agreements. This sets the maximum amount of revenue that can be earned per workload unit (equal to a passenger and their baggage or 100 kg of cargo) from all regulated revenue sources. Regulated revenues include passenger charges, landing charges, aircraft parking charges and access fees from third parties providing complementary services. In 2011, revenue from regulated services accounted for 57.2% of the total revenues of the Southeast Airport Group, 78.9% for the Pacific Airport Group and 76.1% for the Central North Airport Group.

Mexico uses a dual till approach to price cap regulation. Commercial revenues, including those generated from the leasing of space to retailers, duty free operations, restaurants, car rental companies and the like, are not regulated.[89] The maximum revenue figure is established for each individual airport. These are, in effect, a joint maximum tariff. The operator is free to set prices for specific services as they wish, as long as the combined revenue from all regulated sources does not exceed the cap.

The fees are set for a five-year period: 2009 through 2013 for the Southeast Airport Group, 2010 through 2014 for the Pacific Airport Group and 2011 through 2015 for the Central North Airport Group. The maximum revenue cap reflects projected productivity improvements. In the case of all three groups, the current rate schedule reflects a projected efficiency improvement of 0.70% annually, down from 0.75% in the previous schedule.

The methodology for determining the maximum per unit revenue is based on the net present value of the cash flow related to the regulated services. It includes the following variables:

- 15-year projections of workload units and operating costs (excluding amortization and depreciation) related to all services that are subject to regulation;

[88] A fifth grouping remained in the public domain. This group consists of airports that were considered to be less economically viable than the ones offered to private interests.

[89] The Federal Competition Commission, in an Opinion dated October 1, 2007, noted that commercial revenues have increased consistently, though they still remained low by international standards.

- 15-year projections of capital expenditures related to regulated services based on air traffic forecasts and quality of service standards;
- Reference values that were established during the initial concession negotiations that are intended to reflect the net present value of the revenues less costs (excluding amortization and depreciation) and capital expenditures plus a terminal value;
- A discount rate that reflects the cost of capital to Mexican and international companies in the airport business on a pre-tax basis as well as the state of the Mexican economy. This rate will be at least equal to the average yield of long-term Mexican government debt plus a risk premium to be determined by the Ministry of Communication and Transportation.
- An efficiency factor determined by the Ministry of Communication and Transportation. This is currently 0.70% per annum for all three operators.

There is a provision for the fees to change more frequently than annually if there has been a cumulative increase in the Mexican Producer Price Index (excluding petroleum) of at least 5%.[90]

Conclusions

Mexican airport fees have been criticised as being relatively high compared to airports in other nations. The establishment of the initial reference value by the Mexican government is key to this outcome however, as it played a key role in the determination of the initial cap and in turn influences the reference value used in the subsequent review processes. In an opinion by the Competition Commission, it was noted that the initial reference values:

> "…make it possible for extraordinary profits to be made. When the airport groups were put up for tender, these potential profits were reflected partially or completely in the bids submitted by the winners, and they therefore became income for the Federal Government."[91]

Thus the policy of the government itself, in trying to maximize its proceeding from the sale of the airports, directly leads to these relatively high charges.

Brazil and Other South America

Background: Brazil

Brazil's airport infrastructure has been under considerable stress, with IATA indicating that 13 of the top 20 airports cannot cope with current demand.[92] Given continued strong market growth, and in anticipation of a significant spike in demand with the upcoming 2014 World Cup and 2016 Summer Olympics, there

[90] There is also provision for special changes to the cap in the case of a natural disaster that affects demand or requires unanticipated expenditures, a significant decline in GDP (at least 5% in a 12-month period), an increase in duties payable by the concession holder, a failure to make required investments, or generation of revenues in excess of the maximum allowed.
[91] Opinion of the President of the Federal Competition Commission of Mexico dated October 1, 2007, paragraph 66.
[92] IATA, "Urgent Change for Brazilian Aviation – Driving Economic Benefits and Improving Competitiveness", Press Release No. 18, 15 March 2011.

were growing concerns about airport congestion and the need for significant infrastructure investment. In response, the Government of Brazil announced the award of an airport concession for São Gonçalo do Amarante International Airport (ASGA) in August 2011. Announcements for airport concessions for São Paulo-Guaulhos, Viracopos-Campinas and Brasilia were made in February 2012.

Regulatory Format

In the Presidential Decree No. 7205 of June 10, 2010, provision is made for regulatory framework for the ASGA concession. A price cap format has been applied with all aeronautical revenues included, as is a portion of commercial revenues, in order to keep aeronautical tariffs as low as possible. This is a hybrid single till approach by which commercial revenues are partially included in order to keep regulated tariffs lower than would otherwise be the case (this is referred to as non-tariff revenue reversion). An efficiency factor is included in order to share efficiency gains anticipated from technological progress with users. There is a minimum level of service component, with investment triggers. There is also a quality factor that is included in the determination of the ceiling. Ceilings are adjusted annually.

The initial tariff schedule was developed in the negotiation of the concession contract. The first re-adjustment will take place once the airport construction is completed, which is to be a maximum of three years after the National Civil Aviation Agency (ANAC) approves the basic design. This adjustment will be based on changes in the general CPI during this period and adjusted by a cumulative productivity factor between the beginning of the term and the completion of construction. Service quality does not play a role in the first tariff re-adjustment. Subsequent adjustments are to be generally made every five years. Tariffs are re-adjusted based on the efficiency factor, the amount of non-tariff reversion to be included each year, and a quality factor.

There is provision for extraordinary revisions in order to “reinstate financial equilibrium.” Options are to change the tariffs, extend the duration of the concession (by up to five years), change the contractual obligations, or to make any other changes agreed to by ANAC and the Concessionaire.

Conclusions

As the initial tariffs were the result of negotiations between the Concessionaire and ANAC, it is not clear from the available documentation how these were established. If there are any issues with this starting point, adjusting them on the basis of a productivity factor, a quality factor and a revenue reversion factor may prove problematic.

The use of private concessions has become fairly common in South America, with Argentina, Chile, Uruguay and Peru having all sold the right to operate one or more of their airports to the private sector (ownership of the airports remains with the government). The regulatory regimes in these countries are not as well documented as elsewhere in the world. A World Bank study found that most countries had regulatory authorities with some oversight of pricing.[93] A number applied some form of price cap regulation (including Argentina and Peru), while others used some form of cost-of-service or contract-based regulation. Most used a single till approach with the exception of Chile and Peru.

[93] Serebrisky, T., “Airport Economics in Latin America and the Caribbean: Benchmarking, Regulation and Pricing”, World Bank, 2012.

In some cases, the lack of an independent regulator has been raised as a problem. For example, the concession for Lima Jorge Chavez International Airport in Peru includes a formula which increases the payment to the government as airport revenues rise. Thus while the regulator has the power to keep rates at a reasonable level, it also has incentive to allow rates to rise in order to generate more revenues for itself.

The United States

Background

For the most part, the main civilian airports in the United States are owned by government, generally at the city or regional (county) level. Operation of airports in the U.S. tends to be by the municipal or regional government (or branch of government such as a port/airport authority) though many municipalities contract out some airport services to the private sector. Operation of Stewart International Airport had been contracted out to a UK based group; however, they sold their interest in the remainder of the lease to the Port Authority of New York/New Jersey. Management of Indianapolis International Airport (and five general aviation airports) had also been contracted out to a UK group, but that contract has expired.

There are few examples of privatised airports in the U.S. Until recently, Branson Airport was the only privately owned commercial passenger airport in the U.S., although various major U.S. airports have had terminals built by private interests. The U.S. Federal Aviation Administration (FAA) authorised the privatisation of Chicago Midway Airport, and a deal was agreed in late 2008 with a private consortium to operate the airport on a long term lease. However, the deal collapsed when the consortium was unable to pull together sufficient financing during the Global Financial Crisis of 2008/09. More recently, a consortium was awarded the right to operate Luís Muñoz Marín International Airport in San Juan, Puerto Rico, which was approved by the FAA by the end of 2012.

Regulatory Format

The U.S. Federal Aviation Administration (FAA) has the ability to regulate airport fees at airports accepting federal funding support. Airport revenues, both by law and by conditions attached to Airport Improvement Program grants, are to only cover the costs of providing airport services; municipalities cannot use airport revenues to cross-subsidize other municipal services. In general, most airports in the U.S. use residual or hybrid pricing where the aeronautical fees are set based on total costs after subtracting some or all of commercial revenues (similar to single till).

For the most part, the FAA does not involve itself in rate setting and encourages negotiation between the airports and its customers. The FAA has rarely needed to use its powers, as government entities operating airports on a not-for-profit basis with no ability to divert revenues have no incentive to impose excessive rates.

In the cases of the attempted privatization at Chicago Midway and the privatisation underway at San Juan, the aeronautical fee structure was specified in the tender documents, having been agreed with the existing airline customers. These fees made allowance for inflation and any capital improvements agreed with the airlines but otherwise would not be subject to change.

Canada

Background

Like the U.S., the main civilian airports in Canada are owned by government, generally at the municipal or federal level.[94] Canada undertook a quasi-privatisation programme during the 1990s whereby the operations of the country's largest airports were transferred to local not-for-profit authorities. These authorities are responsible for the capital development of the airport, but the land itself remains under federal government ownership and is leased to the authority, in some cases requiring a rental payment. No major airports in Canada are privately owned. Terminal 3 in Toronto had originally been built by private interests, but it has since been purchased by the Greater Toronto Airport Authority.

Regulatory Format

In Canada, airports are not subject to any form of economic regulation. The federal ground leases require the airport authorities to consult users about charges and investments but do not require them to act on the users' recommendations or to provide an appeal mechanism.

[94] Some Provincial governments own airports as well, but these tend to be smaller airports that serve remote areas.

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