A COMPARISON OF THE APPROACHES ADOPTED TO REGULATING AIRPORTS IN IRELAND AND NEW ZEALAND

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ABSTRACT
Recent discussion on whether airports can be considered ‘natural monopolies’ and warrant economic regulation mainly relates to larger economies, such as the UK, where market circumstances may exert some constraint on the degree of market power that a major airport has. In smaller geographically isolated economies this is less likely to be the case. The economic characteristics of the aviation markets in the smaller economies of Ireland and New Zealand are likely to give rise to significant market power of the major airports in those countries. The economic regulation of airports in smaller economies is examined through a review of the experience of these two countries, which have some similar market characteristics but which have used very different approaches to economic regulation of their airports. Ireland has applied price caps to aeronautical charges at its largest airport, Dublin. New Zealand has recently amended its light handed approach to the regulation of its major airports. The approaches and experiences with regulation in each case are discussed.

Keywords: Airports, regulation, Ireland, New Zealand

INTRODUCTION

In his opening address to the Conference on the Economics of Airports and Air Navigation Services on 15 September 2008 Gonzalez, President of the International Civil Aviation Organization (ICAO) Council commented on the economic oversight of airports. He said that:

The objective is to prevent abuse from what has been referred to as the ‘natural monopoly’ of a service provider. A State’s economic oversight

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Responsibility can be exercised in several different ways, from a ‘light-handed’ approach to more direct regulatory interventions in the economic decisions of service providers in the economic decisions of service providers, for example through the establishment of a regulatory mechanism. States will have to select the most appropriate form of economic oversight according to their specific circumstances. When deciding on how to exercise their economic oversight function, States should take into consideration the degree of competition between service providers, the costs and benefits related to alternative oversight forms, as well as the legal, institutional and governance frameworks.

This paper explores alternative approaches to economic regulation of major airports for small to medium sized economies where airports have significant market power through the experiences of two countries, the Republic of Ireland (Ireland) and New Zealand. These two countries have some similar economic characteristics, but have used very different approaches to economic regulation of their major airports. In both Ireland and New Zealand the major airports are likely to have strong market power. Ireland has applied a direct regulatory approach to aeronautical charges at its largest airport, Dublin. New Zealand, another island State, has adopted a light-handed information disclosure approach to regulation of its major international airports.

The traditional rationale for the regulation of airports is based on the view that airports have natural monopoly characteristics. Recent views suggest that market circumstances in many countries are likely to have a constraining affect on the degree of market power that major airports have. The characteristics of the air services markets in Ireland and New Zealand are outlined. An overview of the approaches that have been adopted to economic regulation of airport infrastructure in these two countries follows. The comparative experiences of regulation in Ireland and New Zealand are then examined with a particular focus on the effectiveness of the different approaches on restraining market power and the costs of airport regulation.

CHANGING VIEWS ON THE ECONOMIC REGULATION OF AIRPORTS

There is an increasing trend for airports to be operated on a commercial basis independent from government, either as corporatized or privatized entities. The greater freedom to pursue profit opportunities, particularly in a privatized organizational structure, raises the issue of the economic regulation of airports and the form it should take. Traditionally the case for the economic regulation of airports is based on whether airports can be considered to provide services under ‘natural monopoly’ conditions, that is whether airports are associated with significant economies of scale and scope over the relevant range of output so that it is only economic to have one airport supply the market. However, the extent to which airports are a
natural monopoly industry has been questioned. Starkie, for instance, argues that the airport industry is not necessarily a natural monopoly industry; airports do not necessarily exhibit decreasing cost characteristics over more than a modest range of output, although there are impediments to competition. In many regions alternative or secondary airports may be considered to exercise some degree of competitive constraint on major airports. Starkie points out that in much of Western Europe, and in England and Wales there is “a surprisingly dense coverage of airport and airfield activities”. As a result, there is some degree of substitution of one airport for another in these markets.

Oum and Fu (2008) have pointed to general impediments to competition in airport services markets. One impediment is that:

It takes several decades to plan, environmentally review, and construct a new airport especially near a major metropolitan area. The rapid growth of air traffic often creates capacity shortage, which in turn gives airport pricing power.

A further general factor that contributes to the market power of major airports is that the price elasticity of demand for airside services is very low since airport charges account for a relatively small proportion of an airline’s total cost.

There are a number of specific markets circumstances that will affect the degree of market power that an airport has. The regional scarcity of airport capacity, including congestion at an airport or in the airspace surrounding an airport, will influence the degree of market power that an airport has. The vertical relationships between an airport and the airlines using an airport affect the degree of market power. For example, an airport is likely to have less bargaining power if it is served by a dominant network carrier or if an airport is mainly dependent on low cost carrier airlines (LCCs) who are not tied to a particular geographic market (and hence airport). The potential to develop hub-and-spoke networks from an airport to connect origins and destinations will affect the relative market power of an airport in relation to airlines. A major transfer (connecting) hub, such as Heathrow, has some ability to set prices above the competitive level. The degree of competition provided by alternative modes of transport is a further factor that has a bearing on the degree of market power of an airport. For example, high-speed rail transport may be sufficiently attractive to divert passengers from air to rail transport for short haul trips.

Starkie has summarized the position: “the answer to the question ‘how much market power does an airport have’ is circumstantial; it has to be answered on a case by case basis.”

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3 See OECD (2009), Starkie (2008a), (2008b), Starkie (2008b) p.133
4 Oum and Fu (2008), p. 11
5 See OECD Joint Transport Research Centre papers by Starkie (2008a) (2009), Oum and Fu (2008), Neimeier (2009), Oum, Fu & Zhang (2009), and OECD (2009), “Competitive Interaction between Airports, Airlines and High-Speed Rail”, OECD/ITF Joint Transport Research Centre Discussion Papers, 2009/7, OECD publishing,
6 UK Department for Transport, (2009), paragraph 3.10
7 Starkie, (2008b), p. 143
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Given the varying market circumstances of individual airports, an assessment of whether a major airport requires economic regulation on the grounds of the market power it can exercise, and the form that regulation should take, needs to be made on a case by case basis. Further, market circumstances can change over time. The “considerable change within the aviation sector” and “growth in competition and development of regional airports in the UK” led to a review of airport regulation in 2009 by the UK Department for Transport.\(^9\) As a result of the review fewer airports in the UK will be regulated but the regulator will have more powers to adapt economic regulation “to reflect differences across the airports sector and changes over time?”\(^10\)

Different forms of regulation have different benefits and costs. Two forms of regulation that have been applied to privatized and corporatized airports are direct regulation through price caps, known as ‘incentive regulation’, through the use of consumer price index linked price caps, and ‘light-handed regulation’ involving information disclosure and monitoring.

Price caps are a form of regulation applied to monopoly infrastructure services whereby price movements are constrained to a cap usually specified in a CPI-X or RPI-X form. In this equation a Consumer Price Index (CPI) or a Retail Price Index (RPI) measure inflation and an X factor indicates the extent to which prices are required to fall (or permitted to rise) over a defined period, usually five years. In essence, price caps reflect the expected rate of fall (or rise) in prices in real terms without regulatory intervention in the intervening period. The level of the price cap for the next period is typically reviewed by the regulator before the end of the price cap period. This form of regulation was developed in the UK in the early 1980s accompanying the privatization of public enterprises in industries which included telecommunications, electricity, gas and some other utilities. Price caps were seen as a preferable form of regulation to traditional cost-based forms of regulation as they gave incentives to the newly privatized firms to pursue cost efficiencies through the possibility of retaining profits achieved within the price cap period. Additionally, price caps were initially seen as involving less reliance on cost-based information, less intrusive and simpler to administer than cost-based rate of return regulation. While price caps are set on a forward looking basis they have in practice relied on substantial historical information related to a firm’s costs and profitability. RPI-X price caps have been applied to the BAA Airports Limited (BAA) airports in London since their privatization.

Light-handed regulation does not involve direct controls over the prices and quality of services provided by an enterprise. It generally relies on public disclosure of information to interested parties with the potential to activate stronger regulation if it is required to constrain firm behavior. Light-handed regulation can involve a statutory obligation on the part of a service provider to disclose detailed information on revenues and costs, and an obligation to consult users. It may be applied on the grounds that airlines and other users are considered to have sufficient countervailing power to negotiate reasonable charges and other terms and conditions and that the approach involves lower costs of regulation because it is less

\(^9\) UK Department for Transport, (2009), paragraph 2.3
\(^10\) Ibid, paragraph 1.1

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intrusive. Experience with light handed regulation of airports is more limited than that of price caps and is primarily confined to Australia and New Zealand.11

Much of the discussion of airport regulation is in the context of major airports in larger economies, such as the UK, Europe and North America. It seems likely that in many smaller economies, especially geographically isolated ones, that major airports will have significant market power because alternative substitute airports are not available. It also seems likely that the costs of regulation will be relatively more significant in comparison to the resources of the economy and the size of the aviation industry in smaller economies than in the large ones.

There are likely to be economies of scale in the practice of regulation so that administering a particular type of regulation for a particular industry could be expected to account for a greater proportion of the resources of a smaller economy relative to those of a larger economy. Economies such as the UK and Germany are at least ten times larger than the economies of Ireland and New Zealand.12 Similarly, the traffic flows through major airports in larger economies are substantially higher than major airports in the smaller economies. The largest airports in the UK, Germany, Spain, France and Italy each have traffic volumes which are more than double the passenger traffic at Ireland's dominant airport, Dublin, and even higher relative to the passenger traffic at New Zealand's major airports.13 The administrative costs of regulation for small economies may also be affected by potential difficulties in access to specialized skills involved in regulatory practice, especially in the initial privatization or corporatization phases of airport development. It seems likely that in general, the administrative cost of regulating airports will be relatively greater per capita and per passenger in smaller economies than in larger ones. This suggests that where airports have significant market power in smaller economies the form of regulation applied should provide an effective constraint on market power while at the same time have relatively low costs of administration for the Government and the aviation industry in order that the benefits of airport regulation exceed its costs.

THE AIRPORT SERVICES MARKETS IN IRELAND AND NEW ZEALAND

New Zealand and Ireland each have some similar economic characteristics but have some differences in the governance arrangements of their airports. Until October 2004 the three largest Irish airports, Dublin, Cork and Shannon, were run by a state-owned company, Aer Rianta. Under the State Airports Act 2004 these three airports were vested in a new

13 An indication of the relative size of the Irish aviation market in comparison to the larger European countries can be obtained by comparing the passenger traffics at 42 European airports for the years 2003, 2005 and 2007 in Oum (2009), Figure 3-4.1b: Passenger Traffic (2003/05/07) – Europe.

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government owned company, the Dublin Airport Authority (DAA). Dublin Airport is expected to be DAA’s sole remaining Irish airport asset in the company when Shannon and Cork airports have been restructured into viable separate independent entities. Cork and Shannon airports are separate entities in a day-to-day operational sense with their own boards.

The three large airports in New Zealand were corporatized as separate entities with their ownership divided between the New Zealand government and regional councils in the late 1980s. Auckland Airport was privatized in 1998 and is publicly listed on the New Zealand and Australian stock exchanges. Wellington Airport has been partially privatized since 1998 with one third owned by Wellington City Council. The New Zealand Government still retains an ownership share in Christchurch airport with the Christchurch City Council retaining majority ownership of the airport.

Comparisons between air services markets in Ireland and New Zealand

The populations of Ireland and New Zealand are comparable; Ireland is estimated to have 6 million people and New Zealand 4.4 million. Dublin, the capital and largest city in Ireland, has a population of 1.7 million, by comparison Auckland, the largest city but not the capital of New Zealand, has 1.3 million. Tourism is a significant industry in both countries accounting for around 4 to 5% of GDP. As Ireland and New Zealand are island based states air transport is vital for international travel and trade.

Ireland is a relatively wealthier country than New Zealand and experienced faster growth in population until the onset of the global financial crisis. Rapid growth in air traffic at the three Irish airports accompanied Ireland’s rapid economic growth and rising consumer incomes from the late 1990s onwards. During this period there was increased demand for Intra-European and North American passenger and freight services for business activities and tourism. As a consequence Dublin Airport experienced significant growth in passenger numbers and congestion in its passenger terminals. More recently Ireland has been more

16 IMF, Data and Statistics, World Economic Outlook.
http://www.imf.org/external/ns/cs.aspx?id=28 Downloaded 15/05/2010
Based on IMF statistics Gross Domestic Product (GDP) based on purchasing-power-parity (PPP) on a per capita GDP basis has been consistently and significantly higher in Ireland than in New Zealand over the last ten years. In 2008 Ireland’s GDP was valued at US$267,581 billion compared to New Zealand’s GDP valued at US$131,072 billion. GDP-PPP has grown by 34% over the last five years for Ireland in comparison to 22% for New Zealand.
17 Ibid In the four years to 2004 Ireland experienced an average growth rate of 8.9% compared to 6.6% in New Zealand.
19 www.wikipedia.org/wiki/Dublin_Airport downloaded on 17/08/09 plus various DAA Annual Reports
adversely affected by the global financial crisis with a projected decrease in real GDP of 8% in 2009 and 3% in 2010 compared to a projected fall of 2% in 2009 and an increase of 0.5% for 2010 for New Zealand. The global financial crisis has affected Dublin Airport significantly with traffic estimated to have fallen 15% in 2009 to 20 million passengers. Auckland Airport has been less affected by the global financial crisis.

Each country is served with a network of three primary international airports where one airport, Dublin for Ireland and Auckland for New Zealand, is significantly larger in terms of passenger throughput than the two other airports. In 2008 Dublin Airport had 23.5 million passengers in comparison to 3.2 million at Shannon Airport and 3.3 million at Cork Airport, Dublin Airport therefore dominates the airport market in Ireland representing around 77% of the total air traffic for the three airports. Cork Airport has been growing at a faster rate than Dublin Airport in terms of the number of passengers using the airport. Belfast Airport in Northern Ireland is the closest major international airport to Dublin Airport. It had 5.2 million passengers in 2008.

Although Auckland Airport is the dominant airport in New Zealand, there is a more even distribution of traffics between the three major airports. Auckland Airport had 13.2 million passenger movements in 2007-08 while Wellington had 5 million and Christchurch had 5.9 million passengers, Auckland therefore represented 55% of passenger movements for these airports. Auckland and Wellington are on the North Island and Christchurch is on the South Island and consequently domestic air traffic is of greater importance in New Zealand compared to Ireland. Alternative modes of travel for domestic trips (rail and bus services and driving) between Dublin and Cork, and between Dublin and Shannon take around 3 to 4 hours in duration and are a possibility for domestic travel and less time sensitive travelers in

21 Booz & Co. (2009), p.17. It is noted that Dublin Airport is the worst affected airport from the global financial crisis compared to other comparable airports in north-west Europe.
22 Auckland Airport news release, 28 August 2009 identifies that in the 2008-09 year total passenger movements were 13, 012,917, a decrease of 1.4% over the previous year. http://www.aucklandairport.co.nz/Corporate/NewsAndMedia/AllMediaReleases/Auckland-Airport-announces-annual-result-2009.aspx Downloaded 1/11/2009
24 Ibid. The Cork – Dublin route represents 98% of the total domestic traffic. DAA notes that there was a fall passenger numbers on this route due in part to competition from road and rail transport between the two cities.
27 In New Zealand Wellington Airport is around 9 hours driving time from Auckland Airport; Christchurch (south of Wellington) is around 10 hours drive including a ferry trip from Wellington Airport. Driving times between Dublin and Cork, and between Dublin and Shannon are around 3 to 4 hours and therefore land transport is a possible substitute mode of domestic travel. Based on Google, maps, get directions http://maps.google.com.au/maps?sourceid=navclient&ie=UTF-8 Downloaded 4/4/09.
Ireland. Smith (2008) states that the major airports in New Zealand appear to be comparatively poorer substitutes for each other than Belfast, Cork or Shannon airports are for Dublin Airport.

Dublin Airport has a smaller proportion of domestic passengers (3.6% in 2008) compared to Auckland (43.5% in 2007-08). In 2008 Transatlantic and other long distance passengers represented 8.5% of Dublin Airport’s passengers. Intra-European traffic accounts for the bulk of traffic (87.6% of passengers). In comparison 37.4% of Auckland’s passengers are long distance passengers who had origins or destinations which were from the northern hemisphere. Dublin Airport therefore has a smaller proportion of long distance passengers than Auckland Airport.

Amongst the 76 airlines operating from Dublin Airport are two Irish based airlines which account for 76% of passenger traffic; Ryanair, an LCC (42%) and Aer Lingus, the Irish flag carrier which provides a low cost service to European destinations but operates as a full service carrier (FSC) to other destinations (34%). Air New Zealand dominates international and domestic air travel to and from Auckland Airport. While more than 30 international airlines serve Auckland Airport, there is not an LCC airline operating from Auckland Airport which is as dominant as Ryanair is in Ireland.

An overview of market power of Dublin and Auckland Airports

Dublin Airport and Auckland Airport are the largest airports in Ireland and New Zealand respectively. Both these airports face little competition from alternative airports and alternative modes of transport in their respective countries. The shortage of terminal capacity at Dublin Airport (at least until the onset of the global financial crisis and the building of new terminal capacity) has been a factor increasing market power at Dublin Airport. In New Zealand, the shortage of terminal capacity has been a factor increasing market power at Auckland Airport. In this context, the Civil Aviation Authority (CAA) has commissioned a study of the market power at London Heathrow Airport, which finds that the airport has a significant degree of market power but that it is reduced by the presence of competitors on some routes.

In discussing the performance of smaller UK airports Starkie (2008), p.158, has pointed to work undertaken by the Civil Aviation Authority (CAA) on larger (and more leisure orientated) airports in the UK each of which serve a large number of destinations which suggests that a significant number of leisure passengers are, in general, willing to tolerate a journey time of around 2 hours to reach a chosen airport, although, for business travel, one hour is more typical.

Dublin Airport website: [http://www.aucklandairport.co.nz](http://www.aucklandairport.co.nz)
Zealand the relatively longer distances between airports and poorer substitutability of their services is a factor increasing the market power of Auckland Airport (and the other airports).

A potential constraint on the market power of the airports in each country could be some countervailing power by the major airlines using the airports. At Dublin Airport the LCC operator, Ryanair, has a base at the airport and has threatened to reduce its operations at the airport.\footnote{Ryanair plans new British base after dramatic U-turn." By John Mulligan July 31, 2009 downloaded on 17/08/2009 from 
www.independent.ie/business/irish/ryanair\ .} Air New Zealand provides a network service in New Zealand and is a dominant user of Auckland Airport. However, while the issue of market power cannot be fully assessed here, the general economic characteristics of the airport markets for Ireland and New Zealand indicate that the major international airports of Dublin and Auckland are likely to have had significant market power over the decade to 2010.

**OVERVIEW OF THE APPROACHES TO REGULATION OF AIRPORTS IN IRELAND AND NEW ZEALAND**

Ireland and New Zealand have very different economic regulatory frameworks applied to the major international airports in their respective countries. In Ireland a CPI – X price cap approach has been used for Dublin, Cork and Shannon airports which has some similarity to the UK approach to the regulation of the BAA London airports and to Manchester airport. New Zealand has used a light-handed approach to airport regulation involving mandated consultation, information disclosure and the threat of regulation for Auckland, Wellington and Christchurch airports. In both countries the regulatory frameworks are administered by independent agencies that are required to be accountable and transparent in regulatory decision making.

The Irish government established an industry specific regulator, the Commission for Aviation Regulation (CAR), in February 2001 under the Aviation Regulation Act 2001\footnote{See CAR, CP2/2001, pp.3-4} reporting to the Minister of Transport. Until 2004 CAR was required to set price caps for Dublin, Cork and Shannon airports. Cork and Shannon airports were removed from regulation in 2004. In line with common regulatory practice CAR has determined the level of price caps using a ‘building block’ methodology incorporating an assessment of forward looking efficient costs including the assessment of operating expenditure, capital expenditure, return on assets (cost of capital), traffic forecasts and depreciation in order to calculate an allowed revenue stream and maximum price constraint over the next regulatory period.\footnote{CAR, CP6/2008, p.6} Given that price caps only apply to Dublin Airport, and the same regulatory approach applies to the three main New Zealand airports, the discussion of regulation of airports in Ireland and New Zealand compares Dublin Airport with the three New Zealand airports.

Until legislative changes were implemented in 2008, regulation of airports in New Zealand was under an industry specific framework administered by the Minister of Transport.
Regulation of the three international airports in New Zealand was based on a statutory requirement under the *Airports Authorities Act 1966* (AAA) for the major airports to disclose information and to consult airline users before setting charges. The provisions require airports to disclose specified financial information relating to aeronautical activities but are not specific or prescriptive in relation to the principles for the preparation of the disclosed information. Every substantial customer has to be consulted before fixing or altering charges, and larger customers have to be consulted on capital expenditure plans at least every five years; airports however have the power to set charges as they see fit.\(^{39}\) The consultation provisions under the AAA have been complimented by the threat of price control under the *Commerce Act 1986* (the Commerce Act).\(^{40}\)

Consideration was given to strengthening the economic regulatory framework applying to New Zealand’s three main airports in a general review of the economic regulation provisions contained in New Zealand’s competition law in 2007. Following the general review of regulation, new provisions relating to economic regulation were introduced into the Commerce Act and passed as the *Commerce Amendment Act 2008* (the Amendments). The Amendments extend the New Zealand Commerce Commission’s (NZCC) responsibilities to include the regulation of specified airport services at the three largest international airports under a general legal framework administered by a general regulator. The Amendments provide for a broader range of regulatory tools under the Commerce Act so that ‘fit-for-purpose’ regulatory instruments can be applied to regulated goods or services.\(^{41}\) The NZCC will now administer different types of regulation in different industry circumstances with a consistent set of principles applying across industries.\(^{42}\)

Airport services at Auckland, Wellington and Christchurch are automatically subject to a new form of information disclosure regulation.\(^{43}\) The Amendments relating to information disclosure allow a wider range of information to be disclosed including “plans and forecasts about demand, investments, prices, revenues, quality and service levels, capacity and spare capacity and efficiency improvements; and assumptions, policies and methodologies used or applied”.\(^{44}\) The new information disclosure regime is supported by detailed rules, called ‘input methodologies’, on how the information disclosed should be compiled for the value of assets, treatment of taxation and allocation of costs. Once established these methodologies are binding on the NZCC and airports. The new framework is a “totally new regime” which is being developed over a two year period through industry consultation and with the

\(^{39}\) NZCC (2008), para. 138
\(^{40}\) Ministry for Economic Development, Cabinet Paper: Commerce Act Review – Airports, Background, p.2
\(^{41}\) Telecommunications services are regulated by the New Zealand Commerce Commission under the *Telecommunications Act 2001*.
\(^{42}\) The Minister of Commerce in consultation with the sector Minister makes the decision on whether and how to regulate. Before the process of regulation is changed the Commission is required to describe its regulatory methodologies in detail, these in turn are subject to robust appeal processes. NZCC (2008).
\(^{43}\) The Government can impose one or more of the various regulatory instruments under Part 4 after considering a recommendation from the NZCC following an inquiry into particular services under of the *Commerce Act 1986*.
\(^{44}\) The *Commerce Act 1986*, s.53C(2)
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assistance of “leading independent international exports” in parallel with new regulatory frameworks being developed for the electricity and gas industries.\textsuperscript{45} The NZCC aims to produce “consistent disclosed information, both between airports and over time”, as well as allowing enough flexibility so individual airports can present “as realistic a picture as possible of their actual performance”; and ensuring “the underlying assumptions or rationale for information are explicit”.\textsuperscript{46}

The NZCC is expected to monitor and analyze information supplied by the airports and following this publish a summary and analysis of the information “for the purpose of promoting greater understanding of the performance of individual regulated suppliers, their relative performance, and changes in performance over time”.\textsuperscript{47} Additionally, the NZCC must report to the Minister in 2012 on the state of the markets for airport services and on the effectiveness of information disclosure regulation in promoting the objectives of the Act, which include promoting the long-term benefit of consumers by promoting outcomes that are consistent with outcomes produced in competitive markets.\textsuperscript{48}

The NZCC expects that the new information disclosure regime will influence the performance of airports in New Zealand:

\begin{quote}
Despite being a relatively light-handed form of regulation, information disclosure can be a powerful tool in setting standards on what is acceptable and for early identification of trends which may cause concern.\textsuperscript{49}
\end{quote}

The NZCC considers that placing information and analysis about airport services into the public domain can provide some of the incentives found in competitive markets. Consumers’ countervailing power can be enhanced, thereby assisting in limiting excessive profits as well as in facilitating consumer engagement with regulated suppliers about the desired level of service quality. Another benefit is the possibility that if better information is given to airport owners it can allow comparisons with airports in other areas and provide incentives for airport management to improve their relative and absolute performance.\textsuperscript{50}

COMPARATIVE EXPERIENCE OF AIRPORT REGULATION IN IRELAND AND NEW ZEALAND

This review of the experiences of airport regulation in Ireland and New Zealand focuses on aspects most relevant to the regulation of airports with significant market power in small to medium economies. One aspect of the experience of the two countries over the decade to

\textsuperscript{46} NZCC (2010), p.6
\textsuperscript{47} \textit{Commerce Act 1986}, s.53B(2)(b)
\textsuperscript{48} See the \textit{Commerce Act 1986}, s.52A
\textsuperscript{49} NZCC (2008), p.25, para. 84
\textsuperscript{50} NZCC (2009b), p.9
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2010 which is important relates to the experience of regulation in providing an effective constraint on market power, or ‘value for money’ airport services reflecting the needs of users. Airport investment, an important component in providing for the needs of users, requires long planning cycles and is associated with significant indivisibilities and economies of scale. The experiences of regulation in Ireland and New Zealand in relation to new investment are reviewed. A further aspect of the experience of regulation of airports that is reviewed is the costs of administering the regulatory frameworks.

The effectiveness of the regulatory frameworks in constraining market power and providing ‘value for money’ airport services

Dublin airport

As CPI-X price caps involve direct regulatory intervention they could be expected to effectively constrain the use of market power. Since its inception in 2001, CAR has undertaken three major price determinations for airport services and a major interim price review. The effect of these price determinations on the level of charges is difficult to assess. Cross country comparisons of airport charges raise a number of issues including taking into account differences associated with geographic regions, airport sizes and the coverage and structure of the charges. In June 2009, the Dublin Airport Authority (DAA) reported that its current passenger charges “are among the lowest of any major European airport and have actually fallen by more than 30% in real terms over the past 20 years.”51 However, it is not clear how relatively low Dublin’s landing fees are. Comparative landing fees calculated by the ATRS Global Airport Performance Benchmarking Study for a Boeing 767 and an Airbus 320 for 2008, Dublin airport had the fourth and the sixth highest landing fees respectively of the European airports measured.52

A feature of the price cap approach to regulation is the incentive created for improved operating efficiency. In terms of efficiency as measured by the ATRS Global Airport Performance Benchmarking Project, Dublin Airport is slightly more efficient than the European mean based on 2007 data.53 A comparison of European airport passenger traffics suggests that the airports with greater efficiency have higher passenger traffics. This suggests that for its size Dublin appears to be a relatively efficient airport.

New Zealand airports

The initial light-handed regulatory approach to airports in New Zealand was replaced because of its perceived deficiencies in constraining the market power of New Zealand’s

51 DAA Media Centre 18 June 2009 “DAA Notes Regulator’s Draft Determination on Dublin Airport Passenger Charges’.
53 Ibid. Residual (Net) Variable Factor Productivity: Overall Efficiency Measure – Europe, p.19 Based on cost competitive index Dublin has lower costs than the European mean for 2007 data, p.23
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major airports. In 1998 high airport charges led to a public inquiry into airport charges. The scope of the inquiry was widened in July 2001 due to concerns that the AAA did not go far enough to protect abuses of monopoly power. The inquiry took four years to complete and did not lead to unanimous recommendations with a majority recommendation for regulation of Auckland Airport and a minority recommendation not to do this. In May 2003 the Minister made a decision that price controls would not apply.54

The issue of New Zealand’s airport charges resurfaced in 2007 when a number of problems associated with the regulatory framework applying to airports were identified.55 The Government considered that “… there are no detailed rules on how information disclosure must be compiled, and there is no monitoring by a regulator of the disclosed information.”56 Further, the Ministry of Economic Development submitted that:

The current threat of regulation is weak. The Commission is not funded to undertake an inquiry on its own initiative, it does not undertake price monitoring of airports, and there is likely to be Government reluctance to undertake a new inquiry within a few years of the last one. Furthermore, inquiries and decision-making (and appeals) take many years, and even if price control is eventually imposed it is not able to recover past excess profits.57

The airline industry, in addition, had argued that the larger airports had been charging excessive prices. Air New Zealand claimed it was unable to obtain service level agreements from particular airports. Auckland Airport was regarded as a relatively high priced airport in an international context.58 Interest by overseas investors in Auckland Airport provided further impetus to changing the regulatory regime to ensure that a clear framework would be in place.59

Information on comparative landing fees in 2008 from the ATRS Global Airport Performance Benchmarking Study for a Boeing 767 and for an Airbus 320 indicates that relative to Australian and Asian airports that Auckland and particularly Wellington had high airport charges.60 Comparative operating efficiency measures indicate that Wellington is less

54 The inquiry was undertaken under Part 4 of the Commerce Act which provides for New Zealand’s primary competition and regulatory agency, the New Zealand Commerce Commission (NZCC), in response to a request from the Minister or on its own initiative, to undertake an inquiry to assess whether price controls should be imposed on specific services, and as a result to make corresponding recommendations to the Minister. To date only two such inquiries have been undertaken by the Commission – the first in respect of certain airfield services and the second in respect of gas pipeline services. See NZCC, (2008), paras. 141 – 143, for a discussion of the Airfield Inquiry.
56 Commerce Committee commenting on the Commerce Amendment Bill, p.13.
57 Ministry of Economic Development, Cabinet Paper, op. cit. p.2 in the “Background”.
efficient than the Oceanic mean but that Auckland and Christchurch have performance close to the mean or slightly better.\textsuperscript{61}

**Regulation and airport investment programs**

**Dublin Airport**

The need for price caps to accommodate large scale investments in the context of rapidly changing demand and differing industry views on investment needs has been a particular issue in regulation of airport charges at Dublin Airport. In its first draft determination in 2001 CAR had to determine price caps which took into account a large five year capital expenditure program which was not supported by an adequate justification and financial analysis and which faced trenchant opposition from many airlines and other airport users, all within its statutory timeframe of six months.\textsuperscript{62}

In its second price cap determination process in March 2005 CAR had to assess a large package of measures including an additional terminal, runway and pier capacity at Dublin Airport required catering for continuing passenger growth. Again CAR had difficulty in obtaining reliable capital expenditure (capex) estimates from DAA. DAA first delivered “a brief high level summary” of the finalized capital program to CAR on 19 September 2005.\textsuperscript{63}

CAR reported:

Unavoidably, the Commission has not had the time to analyze the revised DAA capex programme against the statutory objective of economic efficiency; nor has the Commission had the time to consider the effect of the finalized capex programme on all revenue streams and costs throughout the period of the determination. Such analysis is central to determining the appropriate level of airport charges.\textsuperscript{64}

Given these difficulties CAR made a price determination which relied on the possibility of an Interim Review. DAA submitted a revised capital expenditure proposal to CAR for the Interim Review in December 2006 of €1,178.3 million, approximately double the May '05 capital investment program.\textsuperscript{65} DAA attributed the substantial increase in the capital expenditure primarily to changes in the estimated cost of building a second terminal.\textsuperscript{66} Ryanair and other airlines opposed DAA building a new terminal of this scale.

\textsuperscript{62} CAR, CP7/2001, p.29  
\textsuperscript{63} CAR, CP3/2005 p.3  
\textsuperscript{64} Furthermore, the Government had not yet initiated its independent verification of the second terminal proposal. CAR noted that this verification is a pillar of the Government’s triple safeguard to ensure maximum efficiency and cost effectiveness as stated in the Aviation Action Plan. Ibid, pp.3-4  
\textsuperscript{65} CAR, CP1/2007, pp.6-7  
\textsuperscript{66} Given the lifetime of the assets involved, one issue that CAR sought consultation on was on the share of the total costs that current users should pay? A further issue was whether there are costs that are in some sense attributable to a subset of users and, if so, whether the charges might be structured

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A key issue in the Interim Review was an assessment of whether demand existed for the level of investment involved. CAR handled this issue by adopting an approach which required DAA to assume some of the risk that the new terminal would be too large by not writing into the regulated asset base the full cost of the new terminal. Instead, part of the cost of the new terminal (€152 million) would be set aside and not applied to the regulated asset base (RAB) until annual passenger numbers reached 30 million passengers per annum at which point the incremental investment costs could be recovered on an airport-wide basis. 67

CAR’s third price cap determination in 2009 was undertaken in the context of the onset of the global financial crisis and was associated with considerable uncertainty on the timing of the opening of the second terminal and its associated costs. 68 CAR notes that:

…the economic downturn has led to a significantly reduced forecast for passenger numbers over the period 2010-2014. The Commission’s current forecast for passenger numbers in 2014 corresponds to the level in 2008. This is considerably less than would have been forecast as recently as in 2007 during the Interim Review. 69

In addition to issues associated with passenger forecasts the global financial crisis also raised the issue of the effect of regulation on the financial viability of the airport. Airport users claimed that:

… in circumstances of the current recession, there is a need for prices at the airport to be reduced, in the same way that airlines are reducing fares to stimulate demand. Airlines’ ability to pay is reduced when yields are low. 70

On 27 October 2009 the Minister of Transport issued a direction to CAR. CAR was to ensure that the DAA’s “financial viability is protected in order to implement government policy” including “the development of Terminal 2 as quickly as possible” and with the operation of DAA “on a commercial basis” without recourse to government funds. 71 In its third determination CAR allowed for a significant increase in airport charges with the exact level contingent on whether the new terminal is operationally ready on 1 November 2010. 72 CAR considered that it had provided for DAA to “operate the airport in a sustainable and financially viable manner” while retaining “measures designed to protect the interests of current and prospective users.” CAR noted that “the impact of the fall in passenger numbers is large:

68 CAR, CP3/2009, p.1
72 Ibid.
when the proportion of fixed costs at an airport are high, fewer passengers mean higher charges as these costs are spread amongst a smaller number of passengers.”  

The approach to investment in the New Zealand regulatory framework

The proposed mechanisms for disclosing and reviewing airport investments have been a contentious feature in the development of the new information disclosure regime in New Zealand. The NZCC initially proposed that in addition to the disclosure of indicators based on historical information related to investment, that airport operators develop and disclose asset management plans (AMPs). AMPs would involve the disclosure of forecast capital and maintenance expenditure. They would identify the details of an airport operator’s approach to, and objectives of, asset management and planning processes including the planning and implementation of development projects. They would be expected to cover at least a ten-year forecast period with greater detailed forecasts required for the first five years of the planning period. The NZCC proposed that airport operators disclose AMPs at the beginning of each financial year. The NZCC considered that:

… sound asset management planning is an integral part of ensuring that, over the long term, interested persons can monitor whether or not regulated suppliers face appropriate incentives to innovate, improve efficiency and provide services at a price and quality that reflects the demands of consumers.

The NZCC proposed to undertake an annual review of AMPs to assess whether regulated suppliers’ level of innovation, the efficiency of investment and whether regulated suppliers are making effective decisions about ongoing investment in line with their statutory obligation.

AMPs are often required in regulated energy and water industries. Airport operators in New Zealand argued that the incorporation of AMPs typically used in utility regulation is unnecessary because of general planning approvals, (through Master Plan processes), which they are required to undertake regularly undertake and because of their obligation to consult users on large investments under the AAA. They considered that AMPs would be too onerous and too interventionist in the context of a light-handed information disclosure framework.

The NZCC has modified its approach to the disclosure of forecast information in a Draft Decision on information disclosure. AMPs are no longer required. Forecast information on

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73 CAR, Press Statement, 4 December 2009, p.2. CAR notes 2009 passenger numbers at Dublin Airport are expected to be 12-13% down on 2008 levels: 20.5 million compared with 23.5 million in 2008
74 NZCC, (2009b), pp.88-101
75 Ibid, p.89
76 In the UK, for instance, there is a publicly available recognized standard for asset management in regulated industries published by the British Standards Institution giving guidance and identifying good practice.
77 NZCC (2010)
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total revenue requirements, including capital expenditure, is required to be disclosed following the setting of specified airport prices “in order to make transparent to interested persons the pricing and investment decisions Airports make ...and the subsequent performance resulting from those decisions”.78 The information to be disclosed is closer to airports current practice and expected to result in fewer additional costs. Detailed information is required for the five-year period immediately following the setting of prices (given that a five years period represents typical price setting practice). Less detailed information on forecast capital expenditure is required for a further five years to allow for shifts in project timing and costs to be identified and to capture the medium-term horizon required for planning airport developments.79

Under the New Zealand regulatory regime airport prices are set by negotiation with users and the airport operator. The framework is not expected to influence the investment and pricing decisions of the airport “in a premeditated way”.80 It does not involve direct intervention by the regulator in setting prices or enforcing performance standards. The aim of the information disclosure requirements is to provide interested persons with sufficient information to assess future and historical performance of regulated airport services; where future performance can be assessed in terms of expected profitability and investment efficiency in light of prices set and historical performance assessed through reconciliation of forecast information with actual.81 The availability of this information to users gives the prospect that adjustments in the scope and timing of capital expenditure projects could be made over time through users’ assessments which improve efficiency.

Under the New Zealand framework there is the potential to adopt other regulatory tools following a recommendation from an inquiry and a direction from the Government.82 For example, if agreements cannot be not reached or disputes not be resolved the application of another regulatory tool, such as a negotiate-arbitrate regime, could be considered.

The administrative costs of regulation

The different functions carried out by regulators in different countries, their different legal and institutional frameworks and information availability imply that the administrative costs of regulatory approaches cannot be directly assessed. However some observations can be made on factors likely to affect the administrative costs of the regulatory approaches, such as the processes that have been undertaken, the role of the regulator and the complexity of the framework. 5

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78 Ibid, p.20
79 Ibid, pp.81-82 and Table B, pp.87-88.
80 NZCC(2010), p.22
81 Ibid, p.81

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Price caps in Ireland

Two aspects of Ireland’s regulatory framework stand out in relation to the administrative costs of the approach that has been adopted; one is the proliferation of appeals and judicial reviews of price determinations and the second is the increasing complexity of the price caps.

Since its inception in 2001, CAR’s decisions on airport price caps have repeatedly been subject to legal challenges and appeals.\textsuperscript{83} CAR’s decisions were subject to judicial review in 2003, 2005 and 2007 and appeal panels in 2002, 2006, 2008 and 2010.\textsuperscript{84} The significant legal and in-house cost involved for it and for the industry in defending these reviews has been noted by CAR as a significant driver of its operating costs. Reviews and appeals have been initiated by the airport operator and by the airlines, in particular Ryanair. In 2006 McLay and Reynolds-Feighan commented that “(t)he CAR has become a regular target of Ryanair’s campaign of public criticism, and the airline’s increasingly hostile attitude to the regulator…”\textsuperscript{85} A result of judicial reviews and appeal processes, in combination with the Interim Review, is that price cap determination processes have been occurring continuously over period that CAR has been regulating Dublin Airport, and sometimes overlapping.\textsuperscript{86}

The occurrence of judicial reviews and appeals could reflect a number of factors such as the design of the framework or particular characteristics of the aviation market in Dublin. Regardless of the causes, the high incidence of appeals and legal reviews adds significantly to the costs of administration. An indication of the cost is that over the five year period 2004 to 2008 CAR reported expenditure on legal fees has been €1.3 million, around 15%, out of a total expenditure of €8.9 million.\textsuperscript{87}

In common with price cap regulation in other industries and jurisdictions, price cap regulation of Dublin Airport has become technologically more complex over time.\textsuperscript{88} CAR has made or considered a number of modifications to the price cap approach used in its determinations. For example, it has explicitly taken into account quality of service in the price cap through financial incentives; it has given consideration to alternative approaches to depreciating assets and whether depreciation should vary by capital project\textsuperscript{89} and to a ‘rolling incentive scheme’ to strengthen incentives and remove a possible distortion to efficiency incentives that arise in a price-cap setting due to the timing of efficiency savings.\textsuperscript{90} CAR’s formulae associated with its final decision on 2010 – 2014 charges contains a number of conditional provisions, including provisions for variations in revenue allowances associated with the achievement of milestones relating to completion of the second terminal and other specified

\textsuperscript{83} Press release issued by CAR on 20 May 2008.
\textsuperscript{84} CAR(2010), Annual Report, 2009, p.17 and website: http://www.aviationreg.ie/Regulation_of_Airport_Charges_Dublin_Airport/Default.117.html
\textsuperscript{85} McLay and Reynolds-Feighan, (2006) p.187
\textsuperscript{86} Based on a review of timetables on CAR’s website. Downloaded 16/05/2009 http://www.aviationreg.ie/Regulation_of_Airport_Charges_Dublin_Airport/Default.117.html
\textsuperscript{87} Derived from CAR Annual Reports for the years ended 31 December 2004 to 31 December 2008.
\textsuperscript{88} See Littlechild (2009) for example and information on Ofgem’s website: http://www.ofgem.gov.uk/Networks/rpix20/publications/Pages/Publications.aspx
\textsuperscript{89} CAR, CP6/2008, p. 43.
capital works. While the increased technical complexity of the regime could improve its performance for users and DAA it is likely to increase the administrative costs of regulation for the regulator and the industry.

**The New Zealand framework and how ‘light’ should ‘light-handed’ regulation be?**

The NZCC’s approach to information disclosure regulation for New Zealand’s airports has raised a number of issues related to light-handed regulation of airport infrastructure. Airports have submitted that there is a substantial regulatory burden associated with the level of detail in the information sought under the proposed information disclosure approach and questioned whether the regime will in fact be light-handed. The proposed information requirements represent a significant increase in information currently disclosed by airports. Some costs to the airports and to the NZCC will largely be one off implementation and system development costs. Additionally, as new regulatory methodologies are being developed for the gas and electricity industries at the same time it could be expected that there will be some economies of scope achieved in regulation. However, there will still be a substantial ongoing regulatory task for the airports and for the regulator in comparison to that associated with the previous framework.

Airport operators have also argued that information disclosure regulation should not involve the collection of future projections and forecasts and other information typically used in regulatory price determination. The degree to which information disclosure for airports should provide information that could be useful for taking the next regulatory step of implementing price controls if they are considered warranted, in part, relates to the extent to which there is a credible threat of stronger regulation if an airport is considered to be abusing its market power. Submissions to the NZCC reflect different views on the purpose statement in the Act (s.52A) and whether this implies ensuring that the regulator will have sufficient information to impose an alternative form of control if this is deemed necessary. The NZCC has noted that its proposed disclosure requirements are clearly provided for in the Amendments to the Act and that the design or application of forecast information is in no way intended “to directly interfere with Airports’ ability to set terms or prices as they see fit.”

The new regulatory approach in New Zealand has limited appeal rights. Under the Amendments the Court may only allow an appeal on merits for input methodologies if it is satisfied that: “the amended or substituted input methodology is (or will be) … materially better in meeting…” one or both of two purposes. One purpose is the overall purpose of Part 4 (s.52A) and the other purpose is a separate purpose of input methodologies which is to:

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92 See submissions to the Commerce Commission Discussion Paper including Air NZ submission.
93 NZCC (2010), p.84.
94 The Commerce Act 1986, s.52Z(4)
... promote certainty for suppliers and consumers in relation to the rules, requirements, and processes applying to the regulation, or proposed regulation, of goods or services under this Part.95

Thus the appeal provisions involve a comparison between two methodologies rather than consideration of the Commission’s decision alone.96 There are only appeals on points of law for final NZCC decisions relating to specific firms; that is there is no ability to seek a merits review “for implementation issues or practicalities around seeing through the decisions that have been made post the input methodology decision-making.”97

SUMMARY AND CONCLUSIONS ON THE EXPERIENCES OF IRELAND AND NEW ZEALAND IN THE REGULATION OF AIRPORTS

Ireland and New Zealand are two island based nations where the largest airports are likely to have had a high degree of market power over the decade to 2010, given the characteristics of the aviation markets in each country. As both countries are relatively small economies, the resources devoted to regulation need to be carefully considered in relation to the potential efficiency benefits from regulation.

New Zealand has had a minimalist light handed approach to regulating its major airports. This approach was considered to be ineffective in constraining the market power of those airports and led to a demand for a stronger approach to airport regulation. A general review of the regulatory arrangements in New Zealand’s competition law in 2007 led to a new, more rigorous, information disclosure approach being adopted for airports.

New Zealand now has a new general framework for economic regulation of regulated services (in industries other than telecommunications) administered by the NZCC, a general economic regulator. The framework incorporates greater certainty through prescribed methodologies for preparing information required by the regulator and contains a range of regulatory tools which can potentially be used for regulated services. The major airports in New Zealand will be covered by an information disclosure regime incorporating prescribed methodologies for some of the information required to be disclosed; the disclosure of forward looking information; and regular assessments of disclosed information by the NZCC. This information is expected to be more useful for interested parties in their negotiations with airports. Also, the new information disclosed would be useful in price determination if, as a result of a recommendation from an inquiry, the Government decided that the NZCC should regulate airport prices. The credibility of a threat of stronger regulation is increased which could be expected to have an indirect influence on the behavior, and hence performance of New Zealand’s major airports. It therefore seems likely that the new approach will provide a

95 Ibid, s.52R
96 Small (2009).
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more effective constraint on the market power of New Zealand’s major international airports than the previous approach.

Under the new information disclosure requirements the NZCC proposes to require airports to disclose more detailed information on actual and planned capital expenditure and to compare planned investment with actual investment. In addition the NZCC has an active role through publication of summaries and analysis of airport information. The regular disclosure processes to interested parties on investment planning and performance, and evaluation by the NZCC, could permit some flexibility to accommodate changing market circumstances through adjustments to the timing and scope of investment plans through negotiation between airports and users.

The CPI-X price cap approach applied in Ireland is a direct regulatory approach which sets maximum airport charges based on estimated forward looking efficient costs. While providing an effective restraint on airport market power and providing incentives for airport efficiency, the approach has encountered a number of difficulties. Price determination by the aviation regulator has been carried out against a background of rapidly changing economic circumstances for Ireland and its aviation industry. This has made the determination of price caps to take into account large scale and contentious investments particularly challenging. The provision of appropriate and timely information to the regulator to determine price caps within the statutory time frame has been an issue. There has been a high incidence of appeals and judicial reviews and price cap determinations have become increasingly complex over time.

A key difference between the two approaches is the relatively greater scope for airports and users to negotiate pricing and quality of service levels. Under the New Zealand model the regulator will be influential but is not expected to be interventionist as required by the traditional price cap approach. Negotiations between users and airports will be in a context where the general principles that would apply if a review led to the NZCC having a more direct role will be largely known and where the NZCC already has a lot of information required for price determination purposes. This should provide incentives for parties to reach agreement on prices and service standards and resolve differences.

The limitations on appeal processes under the New Zealand model are likely to reduce the administrative costs of regulation. The use of a general regulator in New Zealand, as opposed to a sector specific regulator, should be a further factor reducing the cost of regulation.

The new regulatory framework in New Zealand is intended to be a cost effective but a robust approach to airport regulation. As it is not expected to be implemented before January 2011, and there are complex issues associated with regulating airports, whether the benefits of the new outweigh its costs in practice will be a matter for future assessment.
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