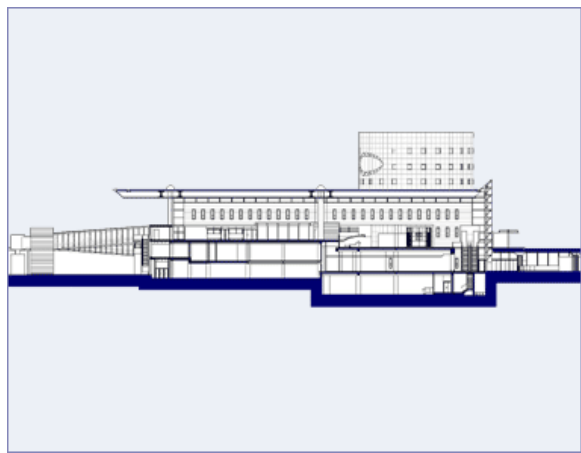

Approaches to Government Funding of Airport Development

Dr. Stephen Labson - October 2008



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1 Executive summary

Scope of funding initiatives

While there appears to be a broad aim in funding airports projects (from an international perspective) by way of user charges and capital markets, it is well recognised that there are policy objectives that would not otherwise be fulfilled without some form of government support. In this regard, we have found a recurring theme in the issues often driving government funding initiatives for airports development of:

- Safety, security and air navigation services.
- Capacity and congestion
- Regional development

In each of these cases, there are numerous examples internationally where federal or local funding programmes have been established in support these broad policy objectives. A key insight in this regard appears to us as building funding frameworks that:

- maintain the transparency of stated policy objectives;
- target government aid to these well defined policy objectives; and
- audit outcomes to these policy objectives.

Funding mechanisms

Where found appropriate, there are various ways in which government can assist in the funding of airports development. Key mechanisms employed by government bodies in support of airport development and operations include:

- Loans
- Loan guarantees
- Direct grants and equity injections
- Discount on user charges funded by government

Key mechanisms employed by government bodies in support of airport development and operations include:

Government funding mechanisms

Loans and guarantees

Loans, sometimes provided on generous terms and conditions, are a key means of providing government support to airports. As well, implicit or explicit guarantees are often a central component government support – especially for jurisdictions where the airport is bundled into a municipal entity.

In some cases, deeply subordinated loans might be provided that may also attach conditions for re-payment based on defined thresholds such as revenue, earnings, or other key financial metrics. In these cases, payment of interest and principal might be deferred where such payments would impair the company's

financial performance or ability to repay other debt providers. However, the preferential nature of these highly subordinated types of loans would in most cases be best applied under full state ownership, and might not be ideal where there is mixed shareholding.

Grants and equity

Direct grants or equity injections are provided by a number of governments globally. The nature of these funding mechanisms will crucially depend on the underlying structure of ownership, and the beneficiaries of such grants or equity injections.

In many cases airports are fully owned by federal, state or local entities, so that direct grants by such entities would be equivalent to an equity injection. Where there is mixed ownership, there would likely be a range of complex commercial matters to address in providing direct support in this form.

Nevertheless, there are a number of international examples whereby government grants have been provided for under mixed ownership. In this regard, it might be analogous to a concession agreement where government makes payments for specific services provided by a third party. Indeed, there a number of cases where concessions arrangements provide the basis for airports funding and explicit use of these commercial frameworks have been applied.

Where there are well defined services provided deemed to be in the public benefit, this 'concessions' approach can provide a transparent and practicably workable way in which to apply government support in mixed ownership models.

Discount on charges

While perhaps not as often utilised as for the other key government funding mechanisms, in some cases government bodies have provided compensation to airports for providing discounts on user charges.

Broadly speaking, funding support is provided to the airport with reference to the discount provided on user charges. Payments to the airport for this 'short-fall' in revenue could be done in a number of ways.

For example, a rather fixed amount might be provided based on financial projections and targeted financial performance. Alternatively, payment on the short-fall could be provided on the basis of the unit discount provided – perhaps in the form of a 'shadow toll' based on aircraft movements and/or passenger numbers (depending on the structure of charges for a given airport).

We further note that there might be competition policy issues to consider if applying differential charges to users, and this should

be examined taking into consideration relevant legislation or guidelines applying to the jurisdiction.

These approaches to funding are discussed in the body of this Review with reference to case studies.

2 Introduction

The primary intent of this high level review is to set out key options at hand for Government funding of airports development as illustrated by a selected set of international case studies. We wish to note that our analysis is positive in nature, thereby looking at *how* government funding approaches are applied in various jurisdictions. We have not examined the *normative* aspects of the matter in regard to the most appropriate approach to apply in a given situation or the criteria that one might apply in assessing the use of government funds for such purposes.

The structure of this review is thus set out as follows:

- As a starting point, we provide a broad overview of approaches to government funding of airports and the key aspects of these approaches we have focused on in our scan of international practice.
- A snapshot of international practices is provided in section 4 illustrating practical applications of various funding approaches that have been applied by various governments.
- A summary is provided in section 5.
- In the appendix to this review, we provide frameworks for government funding set out by the ICAO, World Bank, and European Union.

3 Overview of approaches to government funding

Before setting out more detailed examples of funding approaches applied by various jurisdictions, we wish to first set out key aspects of funding approaches found globally. The material provided in our case studies will focus on these aspects of government funding, and aim to provide practical examples of how these issues have been addressed.

3.1 *Scope of projects funded*

From an international perspective there are a range of objectives that various government bodies would have in regard to the scope of airports projects that they would intend to support. In this regard, one will often find the following matters as driving government funding initiatives:

- Safety, security and air navigation services.
- Capacity and congestion
- Regional development

In each of these cases, there are numerous examples internationally where federal or local funding programmes have been established in support these broad policy objectives.

In regard to safety, security and air navigation services, in developed countries one would find a significant number of programmes initiated in regard to security concerns perhaps driven by 9/11. In developing countries the emphasis would often be on safety and enhancement of air navigation systems.

With the robust growth in air transport seen throughout much of this decade, airport capacity and congestion is rapidly becoming a key driver of public policy. While direct users charges are perhaps more often employed in addressing this specific matter, government programmes are also applied whereby investment in primary infrastructure of runways and terminals is supported in various ways.

In both developed and developing economies, regional development continues to maintain its importance as a policy aim, and reason for providing government support for airports development and operations. Moreover, various international agreements tend to provide greater autonomy to jurisdictions in allowing government finding where it is shown that the aim is for regional development.

We will provide examples of such initiatives found internationally in the case studies that follow.

3.2 *Funding mechanisms*

Where found appropriate, there are various ways in which government can assist in the funding of airports development. Key mechanisms employed by government bodies in support of airport development and operations include:

- Loans

- Loan guarantees
- Direct grants and equity injections
- Discount on user charges funded by government

We first set out the broad way in which these funding mechanisms are sometimes applied internationally.

Government funding mechanisms

Loans and guarantees

Loans, sometimes provided on generous terms and conditions, are a key means of providing government support to airports. As well, implicit or explicit guarantees are often a central component government support – especially for jurisdictions where the airport is bundled into a municipal entity.

In some cases, deeply subordinated loans might be provided that may also attach conditions for re-payment based on defined thresholds such as revenue, earnings, or other key financial metrics. In these cases, payment of interest and principal might be deferred where such payments would impair the company's financial performance or ability to repay other debt providers.

For example, Munich airport has purportedly received a 767 Million Euro loan in which interest is only payable if the airport is making accounting profits.¹

Grants and equity

Direct grants or equity injections are provided by a number of governments globally. The nature of these funding mechanisms will crucially depend on the underlying structure of ownership, and the beneficiaries of such grants or equity injections.

In many cases (internationally) airports are fully owned by federal, state or local entities, so that direct grants by such entities would be equivalent to an equity injection. Where there is mixed ownership, there would likely be a range of complex commercial matters to address in providing direct support in this form.

Nevertheless, there are a number of international examples whereby government grants have been provided for under mixed ownership. In this regard, it might be roughly analogous to a concession agreement where government makes payments for specific services provided by a third party.

This approach has been used (for example) in Italy, where considerable use of concession contracts exist under mixed ownership models, with the Italian government has provided significant levels of funding to major airports through concession arrangements².

¹ Air Transport Group, Cranfield University, *Competition between Airports and the Application of State Aid Rules*.

² See Air Transport Group, *op cit*.

**Discount
on charges**

While perhaps not as often utilised as for the other key government funding mechanisms, in some cases government bodies have provided compensation to airports for providing discounts on user charges.

Broadly speaking, funding support is provided to the airport with reference to the discount provided on user charges. Payments to the airport for this ‘short-fall’ in revenue could be done in a number of ways.

For example, a rather fixed amount might be provided based on financial projections and targeted financial performance. Alternatively, payment on the short-fall could be provided on the basis of the unit discount provided – perhaps in the form of a ‘shadow toll’ based on aircraft movements and/or passenger numbers (depending on the structure of charges for a given airport).

We further note that there might be competition policy issues to consider if applying differential charges to users, and this should be examined taking into consideration relevant legislation or guidelines applying to the jurisdiction.

We set out example of these various funding mechanisms in our case studies.

3.3 Source of funding

For ease of discussion, we have so far simply spoken about “government funding”. This is, of course, an extremely broad characterisation of the complex matter at hand. The primary sources of airports funding are varied and often dependent on the specific organisational and commercial structures of the jurisdiction and the airport being funded.

The primary sources of (government) funding we have in mind are:

- General fund (federal or local)
- Airports Improvement Funds
- Bonds
- Joint funding with multi-lateral donors

Forms of support for airports development can be funded from the general taxing base of the federal or local authority. This form of funding is perhaps more often utilised by local authorities where there is not strong separation between the funding agency and the airport. The general tax base is also a source of funding where there are broad policy objective to be met that warrants a broad base of support. For example, general funds are often utilised by federal or local authorities in addressing matters of regional development or public safety.

In many cases, however, more 'ring-fenced' sources of funding are utilised such as special account airport improvement funds, bond raisings, and sovereign funds. These sources of funding are discussed in greater detail below.

Airport Improvement Funds

As described by Nakagawa and Matsunaka³, Airport Improvement Funds are used in countries such as Japan, the US and France, whereby a special account is created as part of the general budget with its use being restricted to airport improvement. For example, in the US the Airport and Airways Trust Fund was established in 1955 in the United States, although this programme has gone through significant changes since. (The US programme is described in greater detail in a later section of this Review).

Airport Improvement Funds

- **In Japan**, both decision making and financing are undertaken at the national level. A special government account for airport improvements receives from landing fee and aircraft fuel taxes. The burden for airport improvement between central and local governments are determined in accordance with the airport improvement act of 1956, and except for the three international airports (Tokyo Narita, Osaka Kanasai, and Nagoya Chubu), airports are improved without reference to the income and expenditures of each airport.

- **In the United States**, the federal government established the airport and airway Trust Fund (AATF) that accumulates specific finds through the following taxes: ticketing, aviation freight, departure, and aviation fuel. The National Plan of Integrated Airport Systems (NPLAS) has a grant program based on the Airport Improvement Program (AIP) that bestows federal subsidies on airports that generally cover one-third of airport improvement expenditures but depend on the scale of the airport. At local airports, where independent operations are difficult, the federal government may provide as much as 90% of the investment costs, whereas a large scale airport management, so operating expenses must be covered by landing fees, stopover fees, rental fees for terminal buildings, income from concessions and parking, et. Deficit supplements are covered by the general accounts of the local governments concerned.

- **In France**, the central government has a civil aviation special account called BAAC [Budget Annexe de l'Aviation Civile]. Except airports in Paris, which are controlled by the Paris Public Airport Corporation (ADP) [Aéroport de Paris], construction is subsidized but not operations. Ideally, construction, management, and operations should be self-supporting, so there is no generalized national improvement plan. Capital investment for such projects as expansion requires that an airport authority evaluate the investment in the light of expected returns.

Source: Nakagawa and Matsunaka.

³ Nakagawa and Matsunaka, *Transport Policy and Funding*. 2006.

Bonds

Bonds are a primary source of funding in countries with well developed capital markets. There are, however, various facilities applied in raising funds in this matter, ranging from strong government support – to that of a purely commercial nature.

As described in work carried out by the Transportation Research Board⁴ four basic types of bonds are issued to fund airport capital improvements:

1. General obligation bonds supported by the overall tax base of the issuing entity (the airport sponsor).
2. General airport revenue bonds (GARBS) secured by the revenues of the airport and other revenues as may be defined in the bond indenture.
3. Bonds backed either solely by user charges and/or defined airport revenues generated by rentals, fees, or leases.
4. Special facility bonds backed solely by revenues from a facility constructed with proceeds of those bonds.

General obligation (GO) bonds

GO bonds may be issued to finance airport capital improvements, backed by general tax revenues of the city, county, or state that owns and operates the airport. Specifically, local general tax revenues such as sales, income, or property taxes may be pledged as a source of repayment for GO bonds, although the airport operator may actually pay debt service from airport sources, or, in rarer instances, general local taxes may directly pay debt service on proceeds used to fund airport projects.

General airport revenue bonds (GARBS)

GARBS are traditionally the most commonly issued bonds for airport infrastructure. Their credit rating is based on revenues generated at the airport from airline rates and charges, parking, rental car operations, terminal concessions, other leases, interest, and any other revenues of the airport.

Bonds backed by user charges

Bonds that either include a pledge of revenues from users charges that are to be repaid in part or in full from such revenues.

Special facility bonds

Bonds that include a pledge of revenues from specific facilities such as parking or leasing of other stand-alone facilities.

We note that the use of these bond structures is most relevant to US airports, and have a varying degree of 'government support. That said, there are aspects of these facilities that would be found in funding approaches in many countries.

⁴ Transportation Research Board, Airport Cooperative Research Program, *Innovative Finance and Alternative Sources of Revenue for Airports A Synthesis of Airport Practice*. 2007.

Below we categorize these bond facilities by the scope of government support provided.

Types of bonds used in airport funding

Bond type	Level of government support
General obligation bonds supported by the overall tax base of the issuing entity (the airport sponsor).	High
General airport revenue bonds secured by the revenues of the airport and other revenues as may be defined in the bond indenture.	Low – depending on recourse in case of default.
Bonds backed either solely by user charges and/or defined airport revenues generated by rentals, fees, or leases.	Low – depending on recourse in case of default.
Special facility bonds backed solely by revenues from a facility constructed with proceeds of those bonds.	Low – depending on recourse in case of default.

Joint funding with multi-lateral donors

Joint funding initiatives have become more common place in airports development in the last decade. Multi-lateral donors such as the IBRD, IFC, AfDB and others now have significant programme in place with a number of projects sponsored globally. In many cases, funding is jointly provided by the donor agency as well as a component provided by the local government.

Two examples are provided below in regard to joint funding of airports development:

Joint funding – Morocco airports development

Approved in March 2001 and signed in January 2002, the project has increased the contribution of the air transport sub-sector to the national economy. Specifically, the project aims at improving the capacity of the Mohammed V International Airport in Casablanca and Morocco's national air navigation security.

The project

The project comprises five components: the construction and equipment of the departure hall at the Mohammed V Airport in Casablanca; the construction of a second main runway and the reinforcement of the current runway; air control; airport security; and project monitoring and coordination activities.

Project funding

Costing a total of UA 98.07 million, the project was financed jointly with the Arab Fund for Economic and Social Development (AFESD). The African Development Bank's participation amounting to UA 54.51 million (53.74% of total project cost, net of taxes and customs duty) covers the total foreign exchange cost, except for costs related to the airport building. AFESD is

financing the airport departure hall sub-component of UA 26.70 million, i.e. 27.23% of total project cost, excluding tax. The National Airports Authority (Office National de Aéroports, ONDA) is funding the local currency cost of UA 18.67 million, i.e. 19.03% of total project cost, excluding tax.

Joint funding – Airports Authority of Jamaica

Funding has been provided to the Airports Authority of Jamaica (AM) Ltd. to improve the efficiency, quality and sustainability of airport transportation services available to the tourism industry and other export sectors of the economy in order to sustain the export drive.

The program is comprised of the following three components: (1) Civil works at the Norman Manley International Airport (NMIA) in Kinston; (2) Communications system - upgrade and rehabilitation of the national air traffic control (NATCF) and navigational aids equipment and associated facilities at both NMIA and the Sangster International Airport (SIA) in Montego Bay; and (3) Regulatory and institutional activities.

Funding provided by:

IDB:	US\$ 26,535,000
Co financing MIF:	US\$ 570,000
Government funding:	US\$19,700,000
Total :	US\$ 46,805,000

4 A snapshot of international practices

A small set of international case studies is provided below to illustrate how key approaches to government funding of are applied in practice.

We again note that the intent here is not to provide a comprehensive review of international practice – but rather to provide a few clear illustrations of how various objectives and forms of government funding have been applied in other jurisdictions. We do not, however, mean to imply that these approaches might or might not be directly applicable to South Africa. The material provided here is simply meant to help inform that discussion.

4.1 UK – funding of regional airports

While the UK now heavily relies on private sector ownership and operation of major airports, Government policy clearly recognises the role of state aid in support of regional airports where they can enhance economic development and growth in employment in those regions.

The UK government's Air Transport White Paper 2003⁵ sets out a strategic framework for the development of airport capacity in the United Kingdom over the next 30 years. The White Paper provides that

“Government’s policy is to encourage the growth of regional airports to serve regional and local demand, subject to environmental constraints. This will have a number of benefits, including:

- *supporting the growth of the economies of Scotland, Wales, Northern Ireland and the English regions;*
- *relieving congestion at more over-crowded airports, particularly in the South East, and therefore making better use of existing capacity;*
- *reducing the need for long-distance travel to and from airports; and*
- *giving passengers greater choice.”*

In support of this general policy, the White Paper also recognised that in certain circumstances

“... limited public funding may be appropriate provided it is clearly justified by the contribution that the development of the airport can make to wider employment creation, regeneration, social inclusion and regional and local economic development programmes.”

This focus support of regional development and job creation was reiterated in a response to the European Commission⁶ in regard to state aid for the City of Derry Airport:

“4.36 The great majority of airports in the UK are operated on a commercial basis whether privately or publicly owned. At these airports we

⁵ Department for Transport, *The Future of Air Transport*. December 2003.

⁶ : European Commission: State aid No NN 21/2006 – United Kingdom City of Derry Airport

will look to the operators to determine the exact form of development needed and to bring forward proposals for investment in new capacity, in a timely manner, to be funded commercially. However, exceptions to this approach may occur where:

- *small local airports are owned by local authorities or by the Scottish Executive. Some of these airports require deficit funding to cover operating costs and investment in new capacity, but in return offer important accessibility, economic and social benefits to the catchment areas which they serve; or*
- *airports fall within Objective 1 and 2 Areas.⁴ In these cases, applications for public funding to help finance investment in new capacity will be considered on their merits on a case by case basis, provided there is clear evidence that the project is not fundable commercially, after account is taken of an appropriate contribution from airport charges to cover the costs of additional infrastructure. The proposals will also have to offer good relative value for money and not be anti-competitive.*

4.37 In each of these circumstances, some limited public funding may be appropriate provided it is clearly justified by the contribution that the development of the airport can make to wider employment creation, regeneration, social inclusion and regional and local economic development programmes.”

The UK position on government funding of airports to enhance regional development is reflected in the use of public funds for the development of Newquay Airport.

State aid for development of Newquay airport

With the aim of facilitating regional development and diversification of the locality's economic base, Cornwall county council has been given EU permission for the use of public sector funding for Newquay Cornwall Airport worth £44million.

This is meant to provide the essential funding required to transform the airport from its RAF use into a commercial passenger airport. The aid package approved includes funding from EU Objective 1, Government and the Regional Development Agency.

The state aid will support enhancements to the runway and associated taxiways, improved navigational aids, including a new control tower and further enhancements planned for the terminal building and car parks.

4.2 Germany – state aid to Dortmund airport

In 2004, the City of Dortmund, Germany, established the New and Existing Routes Expansion Scheme (NERES) programme⁷ intended to encourage the establishment of new flight connections and the expansion of existing

⁷ www.dortmund-airport.de

connections (greater frequency). NERES entered into force on 1 July 2004 and runs until 30 June 2009. Airlines can apply for support in respect of each new flight connection and all existing connections; the airport must receive the application between 1 July 2004 and 30 June 2009.

As summarised in an assessment of the programme by the European Commission in 2007⁸, Airlines which meet the programme's requirements enjoy the following three advantages under NERES:

- NERES provides for a uniform airport-use charge which is substantially less than the airport's standard charges. The charge varies according to the number of seats in the aircraft. NERES also provides for a minimum amount of EUR 200 per aircraft.
- For establishing a new connection the airport grants a marketing contribution, which is paid in respect of each departing passenger. The contribution depends on the number of new connections and the number of seats made available for the connections concerned. From three flight connections with a capacity of at least 100 000 seats a year a marketing contribution of EUR 0,30 is granted. The contribution increases up to EUR 1,00 in the case of five flight connections and a capacity of at least 225 000 seats a year.
- And lastly, NERES provides for a further reduction in the uniform airport-use charge depending on the annual number of passengers. This change to NERES did not enter into force until 1 July 2005. From 500 000 passengers a year a reduction of EUR 1,00 is granted. The highest possible reduction is EUR 3 for over 2 000 000 passengers a year. Including this further reduction the airport charge must still be at least EUR 5 for each departing passenger.

As the operator of Dortmund Airport, Flughafen Dortmund GmbH made an operating loss in 2001. The losses made reached their highest — EUR 28 million — in 2004, the year in which NERES was introduced. Since then the losses have fallen slightly, comprising EUR 21 million in 2006. During the period 2007 to 2011 the annual losses are forecast to fall steadily and to comprise only EUR 14 million in 2011. The losses have been compensated by Stadtwerke Dortmund AG under a contract concluded between Stadtwerke Dortmund AG and Flughafen Dortmund GmbH (both of which are controlled by the City of Dortmund).

The approach taken here is essentially for the government entity (Stadtwerke Dortmund AG) to fund the short-fall obtained from discounting fees to airlines. However, we do not know exactly how the compensation payments are calculated (e.g. with direct reference to the discount provided, or perhaps in accordance with broader financial performance and funding needs).

We also note that this form of support has been the cause of competition concerns and is being assessed by the European Commission. We do not mean to comment on competition issues of this case, except to the degree

⁸ European Commission, *Procedures Relating To The Implementation Of The Competition Policy*. (2007/C 217/09)

that discounting of fees on a differential basis would, without prejudice, warrant a comprehensive assessment of competition issues applying in the relevant to the jurisdiction.

4.3 Japan – funding of Chubu Airport

Central Japan International Airport Company (CJIAC), just outside Nagoya, is Japan's third most important international airport after Tokyo's Narita Airport and Osaka's Kansai Airport. It is also known as Chubu Airport.

Constructed on a man made island in the Bay of Ise, CJAIC was opened in February 2005 in time for the Expo 2005 Aichi, taking over all international and most domestic air traffic, formerly handled by Nagoya's Komaki Airport

Government funding

Japan utilised what we have broadly called airport improvement funds in development of CJIAC. More specifically, Japan's Fiscal Investment and Loan Program (FILP) funds were utilised in development of CJIAC with the aim to "facilitate air transportation and contribute to the overall development of civil aviation, basic airport facilities (runways, aprons, etc.) and air navigation facilities for aviation."⁹

Japan's Fiscal Investment and Loan Program (FILP)

Japan's Fiscal Investment and Loan Program (FILP) is a government-operated system for directing public savings into projects that are deemed to have one or more of three public purposes: (i) allocation of societal investments to priorities that might not otherwise be financed by the ordinary operations of the market; (ii)intermediating between the government's fund-collecting vehicles and various government projects; and (iii) countercyclical financial operations that would tend to stabilize the economy.

In Japan the assets of the social security funds are deposited with the Trust Fund Bureau of the Ministry of Finance, which uses them to help finance investment and lending operations, administered through the FILP system. The FILP also receives funds from other sources, the most important of which are savings through post offices, a very large amount in Japan.

Source: OECD Economic Surveys: Japan, OECD Publications. 1993.

As set out in an audit of FILP funds¹⁰, the CJIAC was established on May 1, 1998. The Minister of Transport designated CJIAC on July 1, 1998 as the body to construct and manage the new airport under "Chubu International Airport Construction and Administration Law."

For the project, the company received capital investment and interest-free loans from the government, capital investment and interest-free loans from local governments, and capital investment from the private sector. The

⁹ Audit of FILP Funding, 2002

¹⁰ Op cit.

company also used interest-bearing funds raised through the issuance of government guaranteed bonds and interest-bearing loans from the Development Bank of Japan and private financial institutions.

As role of government funding in support of regional development is noted in the audit report on FILP funding in that:

“The following are the important roles of the new airport as the international hub airport in Chubu region, the third core following the Capital and Kinki regions.

- to meet emerging demand for air transportation in the Chubu region in the 21st century

- to be a base for air transportation networks which helps the domestic and international exchange.

- to facilitate the development of Chubu region, which has a large population and a number of industrial complexes. The airport is expected to bring about various social and economic benefits, including promotion of domestic and international exchange, improvement of efficiency of cargo transportation, and industrial development.”

4.4 United States

The principle sources of airport funding in the United States are federal grants, local operating surpluses, special-purpose user taxes, loans from commercial banks, revenue bonds, and general-obligation bonds. Federal grants are typically applied for from the Federal Aviation Administration (FAA) and some of the busiest airports are able to provide some financing with their local operating surpluses.

The main special purpose user tax in the United States is the Passenger Facility User Charge, or PFC, which allows airports to impose an additional charge of \$3.00 or \$4.50 per enplanement for the first two enplanements per one-way trip.

Commercial bank loans also provide short- and medium-term loans to airports, although the interest rate is higher than other sources so they are used less frequently for municipal purposes.

Revenue bonds are issued by a government authority for which principal and interest payments are made from revenue earned by a specific government-owned enterprise. They enjoy tax-exempt status and are secured against the airport's earning power if it is viewed as strong, or may require the airlines to secure part of the debt and assume part of the risk¹¹.

In regard to capital raising, airports have a variety of credit structures available to them for this purpose, the most common of which is the general airport revenue bond (GARB). Other common structures include bonds backed by passenger facility charges (PFCs) and FAA AIP letters of intent

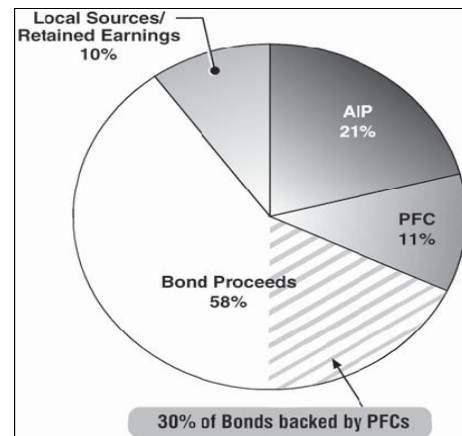
¹¹ This is a unique feature of the US system whereby airlines often take a central role in development (and lease) or purpose built facilities.

(LOIs), either on a stand-alone or double-barreled basis or as part of a GARB pledge. Airports also use dedicated revenue streams, either from a specific airline for a desired project or from a multitenant facility such as a car rental center or a fueling system, as security for nonrecourse special facility

Data compiled by the Transport Research Board¹², shows the principal sources of funds for airport capital projects in the US.

- Proceeds of bonds and other forms of debt.
- PFC revenues.
- AIP grants from FAA
- Internally generated capital resulting from retained airport revenues.
- Security grants from TSA.
- State grants and local financial support.

Sources of airport capital (US 2001–2004 average).



Source: Figure 3, Transport Research Board, op cit.

Federal funding

In the US, the federal government provides capital resources to airports through the Federal Aviation Administration's (FAA) Airport Improvement Program (AIP), although the majority of capital development projects are funded through the capital markets. That said, funding through the capital markets is often implicitly or explicitly supported (in various forms) by the local entity (municipality) owning and operating the airport. In this regard, it is important to note that most US airports are owned by local authorities, although there are some notable exceptions to this.

The Airport Improvement Program (AIP) is the primary source of federal funding for airports in the US. The AIP was established by the Airport and Airway Improvement Act of 1982 (Public Law 97-248). Since then, the AIP has been amended several times, most recently with the passage of the Wendell H. Ford Aviation Investment and Reform Act for 21st Century (AIR-21). Funds obligated for the AIP are drawn from the Airport and Airway Trust fund which is supported by user fees, fuel taxes, and other similar revenue sources.

Eligible projects include those improvements related to enhancing airport safety, capacity, security, and environmental concerns. In general, sponsors can use AIP funds on most airfield capital improvements or repairs except those for terminals, hangars, and nonaviation development. Any professional services that are necessary for eligible projects — such as planning, surveying, and design — are eligible as is runway, taxiway, and apron

¹² Transportation Research Board, Airport Cooperative Research Program, *Innovative Finance and Alternative Sources of Revenue for Airports A Synthesis of Airport Practice*. 2007.

pavement maintenance. Aviation demand at the airport must justify the projects, which must also meet Federal environmental and procurement requirements

Projects related to airport operations and revenue-generating improvements are typically not eligible for funding. Operational costs — such as salaries, maintenance services, equipment, and supplies — are also not eligible for AIP grants.¹³

Funding of John Wayne Airport

Funding of John Wayne Airport illustrates key practical aspects of US funding initiatives. The Airport Improvement Program is part of John Wayne Airport's overall Capital Improvement Program (CIP) which involves construction of Terminal C with six (6) bridged aircraft gates, two new parking structures, and a variety of projects to enhance the existing Thomas F. Riley Terminal.

Sources of funds: John Wayne Airport

<p>Internal Airport Revenues – Net JWA revenues are available to fund capital projects. A minimum balance of \$35 million is kept in reserves, while additional funds have been set aside to support the funding of the Improvement Program.</p>	<p>Internal (JWA) revenue 296,233,708</p>		
	<p>FAA 25,091,135</p>		
	<p>GARBs 91,154,617</p>		
	<p>LOCs 43,697,587</p>		
	<p>PFC 180,461,279</p>		
	<p>Other 15,300,000</p>		
	<p>Total CIP: \$651,938,326</p>		
<p>Federal Aviation Administration (FAA) Grants – JWA can receive reimbursement of up to 80 percent of the cost of eligible capital and noise mitigation projects in Airport Improvement Program (AIP) grants from the FAA. Grants are awarded as "entitlement" or "discretionary" based on specific requirements by the FAA.</p>	<p>General Airport Revenue Bonds (GARBs) – The bonds are payable solely from, and are secured by a pledge of, the net revenues (annual total revenues less operating expenses) of the Airport.</p>	<p>Passenger Facility Charge (PFC) – The PFC was created by Congress in the 1990 Aviation Safety and Capacity Act (ANCA). It is intended to assist airports in funding major infrastructure development. The fee is charged to enplaning passengers only.</p>	<p>Other – Funds included here are from Caltrans for seismic retrofit projects and from the JWA Air Carriers for the hydrant fueling system.</p>

Source: <http://www.ocair.com/Improvements/Finance/finance.htm>

¹³ Source: http://www.faa.gov/airports_airtraffic/airports/aip/overview

4.5 Canada

Through the Airports Capital Assistance Program, the Government of Canada has the aim of improving airport safety, as well as helping the economic viability of this important aspect of Canada's transportation infrastructure.

The Airports Capital Assistance Program is part of the National Airports Policy, which calls for the commercialization of designated Canadian airports through divestiture to community interests. The policy is meant to enable communities to take greater advantage of their airports, reduce costs, tailor levels of service to local demand, and attract new and different types of business.¹⁴

The Airports Capital Assistance Program finances capital projects related to safety, asset protection and operating cost reduction. Eligible airports must have year-round regularly scheduled passenger service, they must meet Transport Canada airport certification requirements, and they cannot be owned or operated by the Government of Canada.¹⁵

Since its creation, the program has distributed over (Canadian dollars) \$466 million for 562 projects at 164 airports. Over 99 per cent of these were airside safety-related projects such as the rehabilitation of runways, taxiways, visual aids and heavy airside mobile equipment

The current five-year program will allocate \$190 million by March 2010 – at an average of \$38 million per year. Contributions are considered for the following types of projects:

First priority projects include safety-related airside projects, such as rehabilitation of runways, taxiways, aprons, lighting and other utilities, visual aids and sand storage sheds. This category also includes related site preparation and environmental costs, aircraft firefighting vehicles, and ancillary equipment and equipment shelters that are necessary to maintain the level of protection required by regulation.

Second priority projects include safety-related heavy airside mobile equipment, such as runway snowblowers, runway snowplows, runway sweepers, spreaders and decelerometers (winter friction testing devices), and heavy airside mobile equipment shelters.

Third priority projects include safety-related air terminal building and groundside projects, such as sprinkler systems, asbestos removal and barrier-free access.

Fourth priority projects include asset protection and refurbishing, and operating cost reduction related to air terminal building or groundside access.

Transport Canada also sets priorities based on detailed technical analyses of facility conditions and maintenance histories, airport traffic and certification requirements.

¹⁴ This material in this section is taken from a "Backgrounder" report provided by Transport Canada, 2008.

¹⁵ The programme is targeted at smaller regional airports typically owned and operated by local authorities.

To be eligible, projects must maintain or improve safety levels, protect airport assets or significantly reduce operating costs. Projects must also meet accepted engineering practices and be justified on the basis of current demand. Airport facility expansion projects will only be considered if the current facilities have a potentially negative impact on safety at the airport.

5 Summary

Scope of funding initiatives

While the broad aim in funding airports projects (from an international perspective) is to do so by way of user charges and capital markets, it is well recognised globally that there are policy objectives that would not otherwise be fulfilled without some form of government support. In this regard, we have found a recurring theme in the matters often driving government funding initiatives for airports development:

- Safety, security and air navigation services.
- Capacity and congestion
- Regional development

In each of these cases, there are numerous examples internationally where federal or local funding programmes have been established in support these broad policy objectives. A key insight in this regard appears to us as maintaining the transparency of policy objectives; targeting government aid to well defined policy objectives; and maintaining an audit of outcomes to these policy objectives.

Funding mechanisms

Where there is the policy aim of supporting various aspects of airport development, there are a range of funding mechanisms at hand that are employed by various jurisdictions. Key mechanisms employed by government bodies in support of airport development and operations include:

- Loans
- Loan guarantees
- Direct grants or equity injections
- Discount on user charges and payments made for revenue short-fall.

Loans and loan guarantees

Loans, sometimes provided on generous terms and conditions, are a key means of providing government support to airports. As well, implicit or explicit guarantees are often a central component government support – especially for jurisdictions where the airport is bundled into a municipal entity.

In some cases, deeply subordinated loans might be provided that may also attach conditions for re-payment based on defined thresholds such as revenue, earnings, or other key financial metrics. In these cases, payment of interest and principal might be deferred where such payments would impair the company's financial performance or ability to repay other debt providers.

However, the preferential nature of these highly subordinated types of loan would in most cases be best applied under full state ownership, and might not be ideal where there is mixed shareholding.

Direct grants and equity injections

Direct grants or equity injections are provided by a number of governments globally. The nature of these funding mechanisms will crucially depend on the underlying structure of ownership, and the beneficiaries of such grants or equity injections.

In many cases airports are fully owned by federal, state or local entities, so that direct grants by such entities would be equivalent to an equity injection. Where there is mixed ownership, there would likely be a range of complex commercial matters to address in providing direct support in this form.

Nevertheless, there are a number of international examples whereby government grants have been provided for under mixed ownership. In this regard, it might be analogous to a concession agreement where government makes payments for specific services provided by a third party. Indeed, there a number of cases where concessions arrangements provide the basis for airports funding and explicit use of these commercial frameworks have been applied.

Where there are well defined services provided deemed to be in the public benefit, this 'concessions' approach can provide a transparent and practicably workable way in which to apply government support in mixed ownership models which are becoming an important mode of airport ownership.

Discount on user charges

While perhaps not as often utilised as for the other key government funding mechanisms, in some cases government bodies have provided compensation to airports for providing discounts on user charges.

Broadly speaking, funding support is provided to the airport with reference to the discount provided on user charges. Payments to the airport for this 'short-fall' in revenue could be done in a number of ways. For example, a rather fixed amount might be provided based on financial projections and targeted financial performance. Alternatively, payment on the short-fall could be provided on the basis of the unit discount provided – perhaps in the form of a 'shadow toll' based on aircraft movements and/or passenger numbers (depending on the structure of charges for a given airport).

We further note that there might be competition policy issues to consider if applying differential charges to users, and this should be examined taking into consideration relevant legislation or guidelines applying to the jurisdiction.

6 Appendix: International frameworks for government funding of airports

Government funding of essential infrastructure is fundamentally a jurisdictional policy choice and subject to the frameworks and laws established by a sovereign state. However, a brief review of key international frameworks appears to us as a useful reference point in setting out various approaches to government funding of airports.

6.1 ICAO framework for government support

The International Civil Aviation Organization (ICAO) sets out the framework for government support of airport development. However, we do first wish to note the focus on alternative forms of funding also proposed by the ICAO in that:

Potential sources of funds will vary considerably from State to State, and which of them are to be approached has to be studied and decided individually for each project. Historically, the most common source of funds for airport development has been from government sources. This includes funds provided by the government directly as well as through government-owned or sponsored financial institutions, including development or export-promoting agencies. The government may be a national government, or one or more foreign governments. Also, one or more international governmental institutions or agencies may be involved. One of the main sources of financing⁵, however, now appears to come from retained earnings, although this does not mean that self-financing still remains significant in many States but is expected to decrease considerably in the years to come with the continuous increase in the number of autonomous bodies operating airports. Compared to the situation a few years ago, the use of commercial loans has shown a remarkable increase, again reflecting the growth in autonomous entities that are expected to secure their own financing. An interesting new trend is the growing importance of bonds and share capital, which again is clearly linked to the new organizational structures. Pre-funding of capital projects through airport charges is another source of financing that is sometimes used in specific cases and under certain conditions.

Nevertheless, government assistance in airports development is seen as appropriate in recognition of local, regional and national benefits derived from airport development. The broad criteria under which government support would be seen as appropriate is set out below¹⁶:

Government assistance in the form of interest-free loans or even grants can appropriately be sought in recognition of the local, regional and national benefits derived from the airport's existence and development. Where revenues are insufficient to cover total operating, costs, including depreciation and interest, the execution of any new development project will inevitably depend on government assistance in some measure, and the benefits just mentioned could play a role of particular importance in

¹⁶ ICAO, Airports Economics Manual. 2nd Edition 2006.

securing such assistance. Their evaluation, even though only practicable in broad terms, should therefore not be neglected and is a primary purpose of the economic impact surveys referred to in Part C. Financial assistance in recognition of such benefits may of course be sought from the local and regional, as well as the national, governments, but in so doing, the airport should be prepared to demonstrate that the particular communities within such jurisdictions do, in fact, derive distinct benefits beyond those realized nationally.

The ICAO further recognises that forecast expenditures and revenues may not be adequate to source commercial financing. In this case, the ICAO notes the option of government guarantees to support access to commercial capital markets.

When an airport seeks commercial loans directly from banks or other domestic financial institutions, it can expect that forecasts of its future operating costs and revenues will be required as a basis for assessing its ability to repay such loans. Where that ability is judged adequate, such commercial financing will probably be obtainable against an appropriate pledge of future airport revenues, but to the extent that is found lacking, it is likely that the loan will only be forthcoming if repayment is backed by the government or some other acceptable guarantor.

6.2 World Bank guidelines for public sector development

The World Bank has recognised the importance of Air Transport Infrastructure (ATI) as a crucial component of broader policy aims of growth and job creation¹⁷:

Improving the delivery of ATI services is important to economic growth and to the reduction of poverty. The efficiency and effectiveness of a country's air transport system, together with the rest of its transport network, are a crucial part of its investment climate. Improving these services encourages investment by business, which fosters growth and job creation.

While we note the broad theme of enhanced private sector participation set out in the World Bank document, they also set out conditions whereby government support is seen as warranted¹⁸

Government intervention (via use of public money, ownership, or regulatory powers) in the airport sector is often suggested in situations in which the public service nature of the business has a very strong contribution to the country's transport network but the economies of scale are such that financial returns are not sufficient to engage private capital. That is the situation that normally arises when it is necessary to upgrade and maintain the network of secondary airports to integrate the country's transport system (i.e., for political as well as for security reasons), but traffic volumes are not expected to be sufficient to fund the upfront

¹⁷ The World Bank, *Air Transport Infrastructure The Roles of the Public and Private Sectors*

¹⁸ Op cit.

investments with required levels of financial returns. Central or local government fiscal contributions are always an option, subject to competing fiscal priorities.

A key point here seems to us as being that direct government funding is seen as appropriate where initial volumes and/or charges are not sufficient to fund socially beneficial airports projects through private sector sources of capital. In this regard, jurisdictional (e.g. national) policy objectives would apply and, ideally (in our view) transparent criteria would be utilised for establishing if a project is indeed socially beneficial from a national cost benefit perspective.

6.3 European Union guidelines on financing of airports

The unique challenges faced in development of regional airports is recognised by the European Commission in its guidelines for financing airport development. While noting that the primary focus of the Commission's guidelines is competition policy, it has specifically addressed issues related to regional development and circumstances whereby state funding of airport development would be seen as appropriate.¹⁹

.... state aid should only be used when it is an appropriate instrument for meeting a well defined objective, when it creates the right incentives, is proportionate and when it distorts competition to the least possible extent. For that reason, appreciating the compatibility of state aid is fundamentally about balancing the negative effects of aid on competition with its positive effects in terms of common interest.

Noting the potential for beneficial development of regional economies concerned, the Commission stated that:²⁰

.... regional airports often face a less favourable situation when developing their services than the major European hubs such as London, Paris or Frankfurt. They do not have a large reference airline that focuses its operations on that airport in order to offer passengers as many connections as possible and to take advantage of the significant economies of scale that such a structure allows.

(21) This is why in these guidelines the Commission has taken a positive approach to developing regional airports, while at the same time ensuring strict compliance with the principles of transparency, non-discrimination and proportionality so as to prevent any distortion of competition which would not be in the common interest in terms of public funding to regional airports and State aid to airlines.

While again noting that the issue of competition policy is a specific matter and perhaps of unique relevance to the European Union, we note the consideration of the Commission on challenges to regional airport development and funding issues that might occur due to lack of economies of scale where there might not yet be a reference airline focusing its operations

¹⁹ European Commission, *State Aid Action Plan Less and better targeted state aid: a roadmap for state aid reform 2005–2009*. 2005

²⁰ European Commission, *Community Guidelines On Financing Of Airports And Start-Up Aid To Airlines Departing From Regional Airports*, 2005.

on that airport. In such cases, key principles set out by the Commission of transparency, non-discrimination and proportionality of the project (to the objective at hand) have been set out whereby state funding of regional airport development would be seen as appropriate.

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