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# Pre-financing airport investments, efficiency and distribution: Do airlines really lose?

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ABSTRACT

This paper assesses the practice of pre-finance, which is very often used by airports to fund major investments, such as runways and terminals. It involves the airport charging airlines higher prices as soon as, and sometimes before, the project's construction commences, often well before it becomes operational. Generally, airlines strongly oppose pre-finance. This paper assesses pre-finance in terms of a range of different impacts. It begins by determining which airports can make use of pre-finance- only those which have market power can do so. Allocative efficiency is enhanced by pre-financing, though the impact is smaller in the case of runways subject to slot controls than when facilities are congested. An important issue concerns the distributional impacts-is the airlines' opposition to pre-finance well founded? It is shown that airlines actually lose by two mechanisms. One of these arises when different airlines and their passengers use the airport when the airport is investing and when it becomes operational. With the second, airlines lose and their customers actually gain, when slot controlled runways are pre-financed. How the airport is regulated has an impact on the incentives of the airport to pre-finance. In particular, price capped airports have an incentive to pre-finance, if allowed to by the regulator, but airports subject to light handed regulation do not seem to have strong incentives either way. The paper concludes by investigating two contrasting case studies.



## 1. Introduction

Pre-financing is a widespread way in which airports finance major investments, such as runways or terminals. By pre-finance is meant the situation whereby the airport chooses to finance, in part or full, the investment in a facility, such as a runway or a terminal, by increasing its charges to current users, before the investment has become operational. Charges will be higher in the investment period, and lower in the later, operational period, than would have been the case if the airport only commenced to change its charges once the airport is operational.

In earlier years, most medium to large airports were directly government owned, or owned by government authorities. Pre-finance is common in the US, where government authorities own most of the airports. Such government authorities and government departments are often constrained in terms of their access to debt markets, and they also do not have access to equity markets. As a result they found it difficult to finance investments, even though these investments easily passed evaluation hurdles. Pre-financing has been the way that airports have ensured that investments go ahead. In recent years, however, many airports have been privatised and corporatized — as a result, they have much freer access to debt markets and access to equity markets, and they do not need to pre-finance. As Tretheway (2013) has noted, the core stated rationale for pre-financing is no longer present. In spite of this, pre-financing of investments in airports remains very common, even with airports which have been privatised for nearly three decades.

There are distinct differences of opinion concerning pre-financing. Airports are often keen to use it, though airlines almost always strongly oppose it (see the comments of Tyler from IATA (Tyler, 2013)) - see also the recommendations of ICAO (2012). This strong position may seem surprising-even if the airlines lose in the short term, it may seem that they will gain through lower charges once the asset is in operation. In the end, pre-financing happens. Many medium and large airports have market power, and thus they do have some discretion over the prices they charge. They are able

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to put charges up over the period of the investment, and not wait till the investment is operational.

Regulation affects the ability and incentive to pre-pre-finance. Most privately owned major airports are subjected to some form of regulation. There are several forms of regulation-hybrid price cap regulation (London Heathrow), cost plus regulation (much of Europe) and Light Handed Regulation (LHR) in Australia and New Zealand. Regulation determines the ability of the airport to set prices, and thus its ability to pre-finance its larger facilities. As an example, the UK Civil Aviation Authority (CAA) has developed detailed procedures to be followed when airports wish to pre-finance investments such as terminals (CAA, 2003). The role of the regulator is thus critical when airports seek to pre-finance facilities.

There are many issues which arise when evaluating pre-financing. However, two which this paper will emphasise are:

- The efficiency issue. Pre-financing can have implications for allocative[1] efficiency. It is possible to make an assessment of whether or not pre-financing promotes efficiency.
- The distributional issue. Which of the parties-the airport, the airlines and the passengers-gains or loses from pre-finance? It can be shown that airlines actually lose out, and passengers gain, in some cases, especially when slots are used to ration capacity-their objections are well grounded.

In addition there are other issues:

- When can an airport pre-finance its investments, and how necessary is it? and
- How do the different forms of regulation affect the outcome?

There are other aspects of pre-financing which are important-one of these concerns the bearing and management of risks. Space limitations prevent a discussion of these.

This paper begins with discussion about which airports can, and which cannot, pre-finance their investments-this is linked to the question of whether the market for the airport is competitive. This leads on to the question of whether pre-financing is necessary. After this, the efficiency of pre-financing is considered-in particular, the efficiency in terms of the use of the capacity of the airport, are discussed. Who gains and loses-the airport, the airlines and their passengers-from pre-financing is next considered. Two contrasting case studies are presented-one where the airport is subjected to hybrid price regulation, and the other involving LHR. Finally, key conclusions are summarised.

## 2. Feasibility and necessity

### 2.1. Is pre-finance feasible?

Pre-finance is only feasible when the airport possesses market power. If an airport is in a competitive market, it will be a price taker, and it will not be able to raise its charges to pre-finance its investments. There is a lively debate, especially in Europe, concerning the extent of airport competition. It is agreed that some airports are effectively operating in competitive markets in some countries with high population densities, such as the UK (Starkie, 2009). This is particularly true with smaller airports, which may be quite close to several competitor airports. There is less competition in less dense countries, such as France, and still less in countries such as Australia. In countries like the UK, competition is not perfect competition in the technical economic sense, but it is likely to be sufficiently strong to mean that the airport has little ability to raise its charges, unless the airport is large (as with London Heathrow) or distant from its competitors. In general, pre-financing will not be an option, unless airlines are not averse to it.

There may be some exceptions to this rule. In some cases, the airlines which use a small airport may be willing to accept pre-finance. They will face higher charges as the airport makes the investment, in return for lower charges when the investment is available for use. This may suit the airlines if the airport is financially constrained-for example, when the airport is owned by a local authority. This is not unheard of in other industries-for example, it sometimes happens when a mine and its infrastructure are being developed. However, these arrangements occur with the voluntary participation of the customers-the competitive infrastructure provider cannot force its customers to pay up-front if they do not want this.

It is unlikely that there will be a clear distinction between “competitive” and “non-competitive” airports. Airports may have some market power, and they may be able to practice pre-finance. However their ability to do so may be limited. If there is a competitor airport some distance away, the airport may lose a small amount of traffic to it-nonetheless, the reduction in revenues if the airport raises prices may be sufficient to make it difficult for the airport to pre-finance. This effect may be relevant in the case of Brisbane airport, which is considered in Section 4 below.

The willingness of airports to pre-finance their infrastructure could be seen as a test of how competitive they are. Airports typically claim that they are competitive, and face strong competition. However, if they insist on pre-financing their investments, in spite of opposition from the airlines, this is evidence that they possess market power. Airport competition and compulsory pre-finance are not compatible.

### 2.2. Is it necessary?

Like other forms of infrastructure investments, airports have several sources of finance. The question is-are there some situations where pre-finance is essential to ensure that efficient investments are made?

If an airport has market power, it is not likely that it would need pre-finance. The options for financing of privately owned airports are wider. The airport can choose equity and debt financing, where there are many debt instruments, including bank finance or quasi-equity instruments. Equity from airlines is sometimes used, and some (very few) private airports are wholly owned by airlines. Private airports can and do choose to have high gearing, and thus cheap finance. Airports which do have market power are not likely to have problems in financing their investments. There is no particular need for pre-financing.

There are some situations where the immediate owner is very constrained as to capital raising. This could be the case where the airport is owned by a quasi-government authority. The most common examples of these occur in the US, where most airports are owned by this type of authority. Other examples arise where local authorities own the airport-in some cases these authorities are strictly constrained in their borrowing powers. Then such cases, pre-financing is the only practical option.

Some private airports, particularly the larger ones, are subject to price regulation. These airports cannot choose the prices they will charge-what happens depends on the regulatory system. Often the regulator allows pre-financing- this often also happens with other regulated industries, such as electricity utilities. For example, the

[1] I.e., efficiency in the allocation of resources, as influenced by pricing and investment decisions, as compared to productive or dynamic efficiency-e.g. as discussed in Merkert and Mangia (2013).

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