

Economic Evaluation of Investments in Airports: Old and New Approaches

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How can airport investments be best evaluated? There is no single way in which airport investments are assessed- there are several techniques of assessment, and these differ very widely in terms of their implications. Thus there is a problem of how best to evaluate investments, whether they are for small changes or major new airports.

In the past, this question was answered by recommending Cost Benefit Analysis (CBA). This was the standard way in which public sector projects, and some private sector projects, across a whole range of industries, were evaluated. More recently, other techniques have been used. There has been a strong growth in the use of Economic Impact Analysis (EIA) models. These typically use some form of Input Output model to assess whether the economy is impacted by the investment. While popular among proponents and non-economists, these models have fundamental flaws which render them inappropriate for investment evaluation. More recently, there has been the use of computable general equilibrium (CGE) models in airport evaluation. These models are rigorous and appropriate for the task. At the present, these models have only recently been applied to the airport evaluation task, and there are several questions concerning how best to use them.

Research Questions and Method

- Firstly, we examine the nature of the evaluation problem for airports, drawing attention to several key problems;
- Next, we look at the history and current use of the different techniques as used in a range of countries;

- Then we recognise the old problems, such as those of noise and value of time, and pay particular attention to newer problems, such as connectivity and tourism benefits, and the existence of wider economic benefits (WEBs);
- After this, the three techniques- CBA, EIA and CGE are evaluated, and the positives and negatives of the three are discussed critically.
- And finally, we discuss how CBA and CGE approaches can be improved to make full use of their potential.

Results

- CBA, which is based on a strong theoretical foundation, is practical and easy to interpret;
- EIA, which has become quite popular, but which is not rigorous and is misleading, and
- CGE modelling, which has only recently been used for airport evaluation, but which is strongly based in theory and can handle evaluation issues which CBA cannot, such as general equilibrium implications of investments.

We strongly discourage the use of EIA. This leaves the choice between CBA and CGE. It may be a matter of choosing one over the other, or it may be a matter of using both in some way which makes effective use of their different capabilities. While CBA is a rigorous way of measuring many of the benefits and costs of airport investments, it is incomplete. The CGE approach has already shown its value in filling in the gaps.

Key Words:

Airport investment, Cost Benefit Analysis, Economic Impact Analysis, and Computable General Equilibrium models; Wider Economic Benefits of Aviation

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