Aviation Economic Benefits

Air Transport can play a key role in economic development and in supporting long-term economic growth. It facilitates a country's integration into the global economy, providing direct benefits for users and wider economic benefits through its positive impact on productivity and economic performance.

Global economic growth is a key driver of growth in air traffic demand. However, while air traffic demand has increased as economies have grown, air transportation itself can be a key cause and facilitator of economic growth. Not only is the aviation industry a major industry in its own right, employing large numbers of highly skilled workers, but more importantly it is an essential input into the rapidly growing global economy. Greater connections to the global air transport network can boost the productivity and growth of economies by providing better access to markets, enhancing links within and between businesses and providing greater access to resources and to international capital markets.

Scope of the report

IATA worked closely with InterVISTAS consulting to analyse the relationship between a country’s level of connectivity to the global air transport network and its level of productivity and economic growth. Aviation connectivity is a measure which reflects the range and economic importance of destinations, the frequency of service and the number of onward connections available through each country’s aviation network. The analysis is across a wide range of 48 countries – including both developed and developing economies – and across a ten-year period, 1996 to 2005.

The Economic Rate of Return of Aviation Investment

The report uses statistical techniques to estimate the economic rate of return – i.e. those that are in addition to the direct returns earned by investors and users – illustrated by a few examples of aviation investment projects. For example, an investment of C$1,805 million at Vancouver airport was estimated to have led to a 5.4% increase in connectivity for Canada as a whole. As such, this raised Canada's long-term productivity by 0.04%. Assuming that the number of hours worked remains constant, this implies an annual boost to Canadian GDP of C$348 million (an annual economic rate of return of 19.3%, implying a full economic payback on the investment within five to six years).

The economic rate of return was also estimated for aviation investment examples in several developing economies (see Table 1). Kenya, with the highest increase in connectivity and a larger economy than the other examples, enjoys the highest annual economic rate of return of 59%. For the other developing economies, the annual economic rates of return are lower but still high, ranging from 16% to 28%. Developing countries face capital costs, especially for new aircraft, that are similar to those faced by developed countries. As such, though the boost to GDP is higher in proportional terms for developing economies, the capital costs are still high.

Nevertheless, the available economic return is still large and provides a strong justification for investment in the aviation industry.

<table>
<thead>
<tr>
<th>Table 1: Economic Rates of Return from Aviation Investment</th>
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<tr>
<td>Kenya</td>
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<tr>
<td>Investment (US$ million)</td>
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<tr>
<td>Increase in national connectivity / GDP</td>
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<tr>
<td>Impact on GDP (%)</td>
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<td>Impact on GDP (US$ million)</td>
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<td>Annual Economic Rate of Return (%)</td>
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THE RELATIONSHIP BETWEEN CONNECTIVITY AND PRODUCTIVITY GROWTH

An econometric model was used to derive the relationship between connectivity and labour productivity. The model identifies and quantifies the relationship while controlling for other factors that may influence productivity, such as education levels, research and development, capital spending, institutional and regulatory factors. The key results derived from the model are:

- **A positive link between connectivity and productivity.** The model shows that connectivity has a statistically significant relationship with labour productivity levels. It shows that a 10% rise in connectivity, relative to a country’s GDP, will boost labour productivity levels by 0.07%.

- **A greater impact for developing countries.** The relationship between connectivity and productivity is logarithmic (i.e. based on percentage changes in both values), rather than linear. This suggests that investment in air transport capacity in developing or transition countries, where connectivity is currently relatively low, will have a much larger impact on their productivity and economic success than a similar level of investment in a relatively developed country.

The results are consistent with previous studies undertaken for other industries. As expected, air transport has a smaller impact on productivity than investment in IT and telecoms, but its impact is still high and can provide significant additional economic benefits. The results update estimates provided in a previous IATA report on Airline Network Benefits, using a more detailed approach to identify the specific impact that can be attributed to aviation. The results show that investment in aviation can deliver economic rates of return that are much higher than for many other public or private sector investments.

**KEY POLICY IMPLICATIONS**

1. **Investment in aviation can generate significant wider economic benefits.**

   There are significant and positive benefits generated by investment in aviation infrastructure and services, particularly in developing economies. By increasing a country’s connections to the global air transport network, investment in aviation can boost its long-term productivity and economic growth.

2. **These wider economic benefits should be included in policy appraisals.**

   The wider social and environmental costs of aviation investment are rightly included in a project appraisal – but the wider economic benefits also need to be included if the appraisal is to be balanced and comprehensive. If these wider economic benefits are excluded, it will underestimate the potential social and economic gains from a project and could see several much-needed investment projects either delayed or not undertaken.

3. **Further liberalisation can help to create increases in air transport connectivity.**

   Airline liberalisation can further increase demand and ensure that the services providing increased connectivity are sustainable over the long-term. It provides the commercial freedom necessary for airlines to adjust capacity appropriately to meet changes in market demand. By way of example, the growth in air services between Poland and the UK since 2003 has increased connectivity as a proportion of GDP by 27% for Poland, whereas the increase in the already well-served UK was a much smaller 0.5%. These changes provide an estimated long-term boost to Poland’s GDP of US$634 million per annum. The UK also benefited, with an estimated boost to its GDP of US$45 million per annum.

4. **The wider economic benefits from aviation help to boost long-term competitiveness.**

   Greater aviation connectivity – and the improvements in productivity and GDP growth it can provide – can also help to boost a country’s competitiveness. By way of illustration, the World Economic Forum (WEF) has developed a Global Competitiveness Index for the travel and tourism sector. The WEF’s index incorporates many of the factors necessary to develop connectivity and create wider economic benefits in terms of productivity and economic growth. There is a clear positive relationship between a country’s connectivity and its performance in the WEF index.

Sustainable growth – not artificial constraint – is the best way to maximise the available economic benefits from aviation while enabling the industry to grow in an environmentally responsible manner.

For further details and for a copy of the full report, please go to: [www.iata.org/economics](http://www.iata.org/economics)