

Summary:

The economic impact of air transport

Avinor is a state owned company responsible for the operation of nearly all Norwegian airports and air traffic control. Avinor asked the Institute of Transport Economics to analyse the economic impact of air transport and set up an outline of a running report system.

The aviation market

Norway is particularly dependent on air transport due to long distances both domestically and to the European continent, sparse population and a topography making it expensive to build roads and railways. Several industries (for instance petroleum, tourism and the health sector) and regions (Northern Norway and the west coast) are especially dependent on air transport.

The airport coverage is good. Two thirds of the population have access to an airport within one hour's travel. In Northern Norway and along the west coast, where alternative transport is inferior, the coverage is even better, as two thirds of the population have access to an airport within half an hour. This is due to the development of the short take-off and landing (STOL) airport system.

Air transport travel frequency increases as distance to airport decreases. Domestic air travel frequency is highest in Northern Norway and lowest in the southeast parts of the country, while the opposite is true of international travel. Regression analysis at the municipal level, controlling for other variables, indicates that decreasing distance to airport has a positive effect on population development.

In 2005 Norway had 9.5 million domestic air trips and 10.6 million international air trips. Over the last 15 years average the annual growth rate has been 4.4 %. Half of long distance travel (trips longer than 400 km) is air transport. The domestic market is divided half and half between leisure and business travel, while 60 % of international trips are leisure trips. 42 % of all domestic air trips involve more than one air flight. Northern Norway and the west coast are particularly dependent on such network travel.

21 % of all domestic business travel was related to petroleum activities. In addition, 440 000 trips were made by helicopter to the North Sea oil fields.

Incoming visitors by airplane stayed for 10 million nights in Norway spending 13 billion NOK (€1.6 billion). Norwegian international air travellers spend about 50 % more abroad than do visitors to Norway. About 5 % of domestic travel is due to sports or cultural activities.

Due to long distances, sparse population and specialisation within the health sector, air transport is often needed when sending patients to the right hospital for treatment. Medical trips account for 13 % of all travel in Northern Norway. On

the regional STOL flights in and out of Bodø and Tromsø, the share of medical trips is 20 %. In addition there are ambulance flights.

In 2003 the average domestic air fare was €340 (2300 NOK), while the business and leisure fares were on average €405 and €270, respectively. The fares reflect the level of competition and airline production costs. The access to air travel is an important determinant of public welfare and business prosperity.

Economic impact

Air transport might be regarded as an economic activity in itself and as a catalytic agent boosting development in other industries. Several effects may be singled out:

Type of impact	Description
1 Direct	Operation of airlines and airports (technical support and handling, catering, fuel, security, cleaning), commercial activities (shopping, restaurants, car rental, parking), land transport and air cargo.
2 Indirect	sub supplies (goods and services) to direct activities (covered in the region)
3 Induced	Spending by employees in activity 1 and 2
4 Catalytic	a- Location impacts (firms and labour) b- Tourism and trade (demand side) c- Productivity and investment (supply side)

A survey at airports showed that there were 20 000 persons directly employed in the aviation sector. By means of a regional input-output model indirect and induced employment has been calculated at 12 000 to 16 000. Catalytic employment is assumed to be 80 % based on estimates from international literature. Thus total employment is estimated to be 50 000 – 70 000 for Norway, of which 30 000 – 40 000 is related to Oslo airport. Within 2040 these figures are believed to be doubled or quadrupled due to traffic growth (2 % or 4 % growth).

Visiting passengers at Oslo airport spent €1.75 billion in the region, of which €1 billion was due to domestic visitors. Limited airport capacity gives rise to large economic costs due to the value of travel time saved if capacity is sufficient. This is clearly showed by calculations from Bergen airport. The report gives examples of local benefits of airports (case Oslo, Bergen, Molde, Leknes).

Avinor and future challenges

Avinor is a self-financing entity. Nearly 40 % of income is due to secondary economic activity, such as duty free shops, restaurants etc. There has been no increase in prices in real terms over the last nine years. Productivity at airports is rather high (600 employees per million terminal passengers), but minor regional airports may be less effective. There is a considerable element of cross-subsidising between airports.

Main future challenges are:

- Accommodate future growth by sufficient capacity, in particular runway capacity.
- Secure long term external conditions that enables Avinor to fulfil its tasks. This may imply taking a wider societal responsibility.
- Maintain strong focus on regularity and punctuality.
- Active work to reduce environmental impacts of aviation.
- Develop services and prices accommodating the increase in low cost traffic.
- Differentiate prices accordingly, also taking the capacity situation into account.
- Develop a robust economy and capacity planning in case environmental restrictions or taxation are introduced.
- Involve regions to a greater extent in the planning and running of airports.
- Document the catalytic effects of aviation.

At the end of the report an outline of a running report system for documentation of the economic impact of air transport is developed.