



Lunch seminar, Monday 8 April 2013

Rijnstraat 8, 2515 XP, The Hague

Room A04.21/B04.10

High speed rail and aviation: from competition to cooperation? Evidence from China and Europe

Discussion

This document contains a reflection of the discussion held during the seminar 'High speed rail and aviation: from competition to cooperation? Evidence from China and Europe'. It does not necessarily represent the views or opinions of Airneth. For a good understanding of the discussion, we advise to go through the presentations of Mr. Zhang and Mr. Lijesen first.

Competition

Over 60% percent of airline seat capacity in domestic China is offered on short-haul routes between 300-1200 kilometers; distances at which HSR competes with aviation. However in practice only 20-30% of the domestic air routes are covered by the HSR-network. This means that only 20-30% of the domestic air routes are affected by competition from the HSR-network. Even on those routes competition between the two modes is limited as both the airlines and the HST companies in China are state owned and rail tickets are priced only slightly lower than air tickets.

Whether competition between air and rail transport is fair, in terms that all internal costs (including infrastructural costs) are reflected in the ticket price, is difficult to say. The cost of the Chinese HSR-network is not fully passed-on to passengers using the network. On the other hand, the same might be the case for airport infrastructure costs. Airlines certainly do not pay for all the externalities they cause.

In Europe HSR-policies are shaped by the national governments. The non-existence of a single European HSR-policy limits the competitiveness of HSR and slows the development of the European HSR-network.

Substitution

For Europe EUROCONTROL estimates that the effect of new or improved HSR connections on some 40 city-pairs will decrease the demand for flights by a little over 0.5%, but the effect will be more significant locally. Substitution from aviation to rail is therefore limited as well as the relieve of congested airports. Policies to develop HSR networks as means to reduce the environmental effects from aviation and to reduce airport congestion might not have the expected effect. Given the large infrastructural cost of HSR networks, one might question the efficiency of such policies.

For China demand substitution from aviation to HSR has not been estimated. At the moment ticket prices for HSR are still relatively high, although somewhat lower than for aviation. The government does not want too much competition between the state-owned railways and the largely state-owned airlines. Substitution is therefore expected to be limited at the moment. Much demand is newly generated demand. It is expected that when ticket prices for HSR come down, substitution and demand generation will increase.

Cooperation

In Europe many airports are linked to the rail network. Some airports are linked to HSR-networks, such as Frankfurt, Paris Charles de Gaulle and Amsterdam Schiphol. We now see airlines such as Lufthansa and Air France cooperating with the HSR-companies at their hubs. The airports still function as hubs, where incoming flights connect to HST's and vice versa. In China air and rail networks are hardly integrated, limiting the potential for cooperation. Currently, only Shanghai airport is linked to the HSR-network. The primary reason for this is that for a very long time the rail ministry acted separately from the ministry of aviation, hindering integration. Recently cooperation started between the two ministries. Air China has announced similar initiatives as Lufthansa and Air France since. A cooperation is not only interesting for an airline in terms of attracting more feeder traffic, but also in terms of service and cost. In case an Air China flight cannot land at Shanghai for instance, it is diverted to Nanjing. Passengers can be put on the HSR-network there to Shanghai, which will take them home quite quickly, without the need to put them into hotels and flying them back to Shanghai later.

HSR: a strategic industry

In China higher income groups still prefer aviation over HSR. The train in general is primarily aimed at lower income groups. The current speed offered at the HSR-network is 350 km/h. Infrastructure and operational costs increase significantly at such speeds. For lower income groups this speed is not optimal. Lower income groups, given their relatively low valuation of time would prefer a slower service against lower cost. A network of 200-250 km/h and a lower ticket price would therefore better correspond to their needs.

China however is still interested in investing in speeds of 380-400 km/h. This has to do with China's economic ambitions. The next stage of economic development in China consists of moving into higher value added industries. HSR is seen by its government as a strategic, technology intensive industry. China currently sources HSR-technology from multiple providers. Not only to increase competition between those providers, but also to obtain as much technological knowledge as possible. This knowledge is combined and modified into a new and possibly superior and competitive product. China aims to export its own HSR technology to other countries in the future. Additionally R&D and innovation will lead to spin-off to the rest of the Chinese economy.

Reliability

The reliability of airlines in China is not good. Aircraft often wait for VIP's that arrive late at the gate. The train network is much more reliable. Trains carry much more passengers than planes, which means that a delay is much more costly. Trains therefore do not wait for VIP's.

Freight

In Europe initiatives are undertaken to put freight on the HSR-network. In China no cargo is transported on the HSR-network, but express mail or express cargo might be carried on board High Speed Trains in dedicated cabins in the future. The potential is certainly there as capacity is not fully utilized and the HSR-network provides a faster alternative to courier companies using road transport.

Future of HSR-network in China

The HSR-network development is only halfway and will be developed further in the coming years. There are no plans to develop magnetic train lines in the near future. Currently there is one line from Shanghai airport to the outskirts of Shanghai, but that is only for demonstration purposes.