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Title **Wider Economic Benefits of High Speed Rail: A Critical Approach**

Track General Papers

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Abstract

· Context and Research Question

The low economic growth experienced by many European countries in the last 5 years has caused many to call for increased investment in transport infrastructure. Referring more or less explicitly to the major public works policies that were introduced during the crisis of the 1930s, political leaders are calling for large-scale investment. These projects suffer from a low or even negative economic rate of return even when non-monetary benefits such as time savings and environmental benefits are taken into account.
In order to get round this difficulty, in recent years new evaluation methods for transport infrastructure projects have been developed, particularly in the United Kingdom and France. Although they adopt different approaches, these methods share the fact that they attempt to assign an economic value to the accessibility improvements provided by agglomeration effects related to new transport services. They even make a direct connection between improvements in accessibility and increases in gross domestic product. Can such methods be trusted?

· Wider economic effects: some doubts on methodology

In the United Kingdom, the concept of wider economic effect (WEE), also known as wider economic benefit (WEB) has been developed in the last 10 years or so (Venables 2004). WEBs are largely due to agglomeration effects. Recently they have been evaluated in detail for the HS2 project (KMPG 2013) as a result of the development of the concept of connectivity, which is directly derived from that of accessibility as presented in the DfT's methodological recommendations. The KPMG study states that the construction of the entire HS2 project could increase GDP by £15 billion per year from 2037, the date by which the entire line would be open. This sum could justify the £60 billion cost of the project even after discounting.
In France, the measurement of accessibility improvements is recommended in the context of the economic appraisal of urban transportation for which it is laid down that "the indicators of accessibility attempt to measure the satisfaction individuals obtain from the transport system". Accessibility is also mentioned in the Robien circular (2005) which lays down the official appraisal methods for transport infrastructure projects. The annexes of this publication show how to calculate the accessibility gains that result from a transport infrastructure project. Contemporary with this publication was a study which proposed to transform accessibility gains into GDP. In a recent memo, the author of this publication showed that a new HSL between Paris and Normandy (costing €18 billion) could easily be made profitable if the increases in GDP provided by the improvement of accessibility were considered.
In the two approaches, the main difficulty is the transformation of consumer surplus (mainly due to time gains) in productivity gains and finally in GDP growth. Even if agglomeration exists, it is very doubtful to obtain productivity gains as a consequence of a better transport service. Such reasoning ignores

the fact that, historically, the principal macroeconomic causal process is that growth in demography and the economy (GDP, productivity) gives rise to transport demand not vice-versa. Another error of reasoning is the confusion between local effects and global effects. The local benefits of transport infrastructure include a great deal of relocation and little net global creation of activities. New infrastructure attracts new activities, but often to the detriment of other areas as it was observed in France.

· Results and contribution to existing literature

As indicated by a survey (Delaplace 2011) comparing French cities with and without high speed rail connection, there is no visible effects of HSR on regional or local economic growth. We can also observe that changes in the number of jobs in a few typical regions of France between 1989 and 2012 were not linked to the date HSLs were opened. The regions that gained jobs are those with demographic growth (Corsica, Midi-Pyrénées, Languedoc-Roussillon…), generally located near the Atlantic and Mediterranean coasts. The sun, via demographic growth, does more for jobs than transport infrastructure.
Last but not the least, both methods ignore that of the cost of investments of this type to the community. Let us consider the case of the Paris-Normandy HSL which requires an investment of €18 billion. Such an investment, amortised over 50 years at a rate of 4%, leads to an annual cost of the debt of approximately €800 million. If we make some very optimistic hypotheses, namely 20 return journeys between Normandy and Paris with double train sets which are completely full (in both directions!), this makes 20,000 return journeys per day, i.e. 6 million commuters per year on the 300 working days of the year, i.e. €133 per day and per return journey for the infrastructure alone. The rolling stock and operating costs will need to be added to this. The total cost of the return journey would be almost €200, i.e. €4000 per month for each commuter. The increases in productivity would have to be enormous to cover charges of this size. For the purposes of comparison, the HSL which is under construction between Tours and Bordeaux (300km, at a cost of €8 billion of which €3 billion are to be provided by public subsidies) will involve a subsidy per passenger per day of approximately €5.
The appraisal methods for transport infrastructure projects need to move into another age by seeking worthwhile improvements in accessibility rather than time savings. Instead of focusing on speed, it is becoming increasingly vital to consider the best ways of improving the reliability of services and transport infrastructure capacity. This does not mean that every HSR project should be abandoned, but we should not attempt to provide high speed transport for daily journeys. HSR should not be used to increase the number of dormitory towns the 100 or 200 km from Paris or London.

References

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