INFRASTRUCTURE ADVOCATE

When We Were Rich: High Speed Rail and Taxpayers Throughout The World

Prof. Germá Bel

Spain has been held up as an example of how the development of a high-speed rail (HSRail) network would be good for California. Spain and California have similar surface areas (505,645 and 423,970 sq km), relatively similar population (47 million and 38 million) and population densities (93 and 92 inhabitants per sq km), and the same distance (430 miles) between their main metropolitan areas: Los Angeles and San Francisco in California and Madrid and Barcelona in Spain.

Reading about the U.S. debate on California HSRail from abroad, the core question from where I sit in Barcelona appears to be: If Spain can make it work, why can't California? Of course, the answer is "Yes, California Can." California is wealthier than Spain. The only thing it needs to develop HSRail is to increase taxes or increase public debt (or both), as Spain did extravagantly—when we were rich.

The international HSRail story from Japan and France to Germany, Spain and Italy, and more recently to China, Korea and Taiwan consistently contains a bitter lesson: What might have been a good idea (under extremely high transit density and moderate construction costs) has turned into a taxpayer's nightmare. This is so because most HRail systems have been initiated and expanded for political reasons without sufficient regard for ridership demand, capital expenses or O&M costs.

Let us be clear: HSRail has been a good idea in some places. The Tokyo-Osaka Shinkansen line manages 140 million passengers per year and, is a great financial and economic success, in spite of high construction and operating costs. So too is the Paris-Lyons Train à Grande Vitesse (TGV); it carries "only" 25 million passengers per year, but moderate construction costs allow it to be successful.

HSRail is fast, reliable, and comfortable. It is more environmentally friendly than its natural competitor, the airline industry. But it is not as environmentally friendly as commonly thought due to the large taking of land, high noise, visual disruption, air pollution and high electricity consumption. Also, because in lines with low to moderate HSRail ridership, replacement of air transit will never compensate for pollution emissions during the HSRail construction phase.

HSRail needs a huge transit density to deliver positive economic and social returns (not to mention financial returns). Tokyo-Osaka was a good idea, for example, but the senseless extension of the Shinkansen network in the 1970s and 80's brought Japanese Railways to bankruptcy, leading to its privatization in 1987. Only 30% of the debt could be transferred to the private investors.

Spanish Nation Building

Certainly, Spain provides good lessons, if taken as a case study. We have the second longest network of HSRail (155 mph) in the world, behind China. There are more lines under construction in Spain (1,043 miles) than in all the other European Union countries combined. The Spanish government announced on February 9 that US$33 billion will be spent until 2020 to keep HSRail extensions alive. One third of it (US$11 billion) will be used to finish the central segment of the 400-mile line linking Madrid and the northwest (total cost over US$25 billion). It is worth noting that that line is expected to handle between one and two million passengers per year in the central segments.

The newly appointed Spanish Secretary for Transportation (Ana Pastor, Conservative) has put it clearly: all Spaniards have an equal right to access HSRail. This is the same view held by the former Secretary of Transportation (José Blanco, Socialist). And perhaps by the next Secretary of Transportation, whoever it is.

Unfortunately, Spain has the lowest ratio of passengers per HSRail-km in the world, about 10,000; that is six times less than Germany and France. This is not a final comparison: our ratio will be much lower by 2020, dropping to about 6,000 passengers per km, as the government's plans for extending the network are implemented.

However, transporting people and fulfilling mobility needs (that is, social welfare considerations) have not been a major factor in HSRail development in Spain. As was explicitly stated by former Prime Minister J. M. Aznar on 25 April 2000, the main rationale for HSRail in Spain is making Madrid, the political capital, equally accessible to all Spaniards by means of HSRail.

Demand considerations? Available alternatives? Costs? Territorial effects? Actual environmental effects? These questions did not enter the decision equation, which was based on just one variable: nation building.

On one side we have been lucky. Average construction costs in Spain have been relatively moderate (but are increasing): about US$40 million per mile in 2011. They are much lower than costs in other countries, and especially lower than in Italy, the EU leader, with costs of up to 2011 US$150 million per mile (and more) on its most expensive lines.

All of the HSRail investment in Spain has been funded with government budget subsidies (Spanish Treasury or EU payments) and debt. But the level of demand cannot sustain even the operating costs (when properly accounted for). And the situation will get worse as new, very low-demand lines open in the future. Demand will be much higher for California HSRail, but costs will get close to the upper band in Italy, if the full project is finally implemented.

Opportunity Cost

Well, Spain is not as rich as it used to be just a few years ago. Because of this, Spanish families and firms are trying hard to reduce private debt, and we are cutting down public spending in schools, hospitals and other areas to contain (not yet to reduce) government debt. At the same time, billions of Euros will be wasted in economically and socially senseless HSRail lines.

More and more Spaniards are wondering about the opportunity costs of HSRail. What could have we done with so many billions invested in low-ridership HSRail? Perhaps a much less expensive modernization of conventional rail? Maybe a much more aggressive investment policy on information technology extension—where we are behind the EU average standards? To maintain and improve our investment in education, so improving our future productivity and well-being? Money is a limited resource, and by choosing senseless HSRail lines we gave up those much better alternatives. This, by far, is the main lesson from Spain.

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