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## Policy & Practice

# *Transport and megaregions: high-speed rail in the United States*

This lead paper examines the status of high-speed rail in the United States within the context of emerging megaregions. It reflects on the current state of high-speed rail planning globally and examines its link to economic planning and enhanced mobility systems. The assessment of high-speed rail planning internationally has significant implication for the United States. Megaregions offer an appropriate spatial scale for US rail planning. The paper suggests high-speed rail is an attractive mode to consider in providing greater connectivity between and within megaregions as the United States considers reinvestment in its infrastructure and regional economies. In addition, three separate comments then consider the points set forth in the lead paper.

Throughout the world, countries are thinking globally and shaping national policy, urban policy and infrastructure investments to establish and secure the competitive advantage necessary for economic growth and success. The shifting tide in world economic power poses significant challenges for governments, businesses and communities charged with charting a way forward. The European Union has identified their strongest economic unit as the 'pentagon', which extends from London to Milan through Germany and has established a Committee on Regions that focuses on economic cohesion, employment and education (Birch, 2009; Ross and Woo, 2009). The TRANS-European networks focus on cross-jurisdictional infrastructure projects. China has implemented a national program for high-speed rail (HSR) investments connecting major population and economic centres (FRA, 2010).

A regional focus underlines these HSR strategies because it allows geographic entities to harness the strengths of interconnected population and economic sectors, providing advantages individual metropolitan centres cannot garner. The region as economic unit is becoming the driving force in the global economy (Ross et al., 2008). According to the United Nations, there are 20 global city-regions worldwide with populations of 10 million or more (Birch, 2009). To continue its role as a leader in the global economy, the United States must identify and understand the economic interaction between itself and other countries and between its own cities and regions to make appropriate investments providing for sustainable economic growth and mobility.

The world's metropolitan areas are merging to form vast 'megaregions' (global city regions) which may stretch hundreds of kilometres across countries and be home

to more than 100 million people. According to a major new report from UN-Habitat, the agency for human settlements (United Nations, 2010), the 'endless city' could be one of the most significant developments – and problems – in the way people live and economies grow in the next 50 years. In its *Biannual State of World Cities Report*, the UN identifies the trend of developing megaregions. The Hong Kong–Shenzhen–Guangzhou region in China is the largest megaregion with a population of approximately 120 million people. Other megaregions are forming throughout the world in Africa, Europe and South America. The UN asserts that urbanisation is now 'unstoppable'. According to Anna Tibaijuka, outgoing director of UN-Habitat, 'Just over half the world now lives in cities but by 2050, over 70% of the world will be urban dwellers. By then, only 14% of people in rich countries will live outside cities and 33% in poor countries' (United Nations, 2010). The development of megaregions is regarded as generally positive and co-author Eduardo Lopez Moreno suggests, 'They [megaregions], rather than countries, are now driving wealth.' However, the migration and focus on cities may be associated with a number of negative consequences, including uneven development, expanding areas housing the urban poor, degradation of services to poor communities and other social and economic inequalities. These consequences may actually lead to the creation of cities within cities with the inner core being home to the poorest, most poorly educated and disenfranchised citizens.

## **United States megaregions**

By 2050, the US population is projected to increase by another 130 million people to more than 400 million. Over the next 20-plus years, more than half of America's population growth and perhaps as much as two-thirds of its economic growth, will occur in several megaregions. Megaregions are extended networks of metropolitan centres and surrounding areas of influence. They cross county and state lines and are linked by transportation and communication networks. These regions of connected cities (the urban core) and their surrounding areas of influence generally have, or are expected to soon have, a population of about 10 million. Currently, seven megaregions have populations of 10 million: California, Florida, the Midwest, the Northeast, Piedmont Atlantic, the Texas Triangle and DC–Virginia metropolitan area. The major cities in the Midwest include Chicago, Minneapolis, Detroit, Cleveland, Pittsburgh, Cincinnati, Indianapolis and St. Louis. The Central Plains megaregion includes Kansas City, Tulsa and Oklahoma City. By 2050, three more megaregions will have populations of 10 million: Arizona, Cascadia and Central Plains (see Figure 1). While all three had populations of less than 10 million as of 2007, only the Central Plains megaregion is projected to have a population of less than 10 million by 2040; however, by 2050 its population will be over 10 million (Ross and Woo, 2009). In the United States, the 10 largest megaregions represent 80% of the country's economic activity.

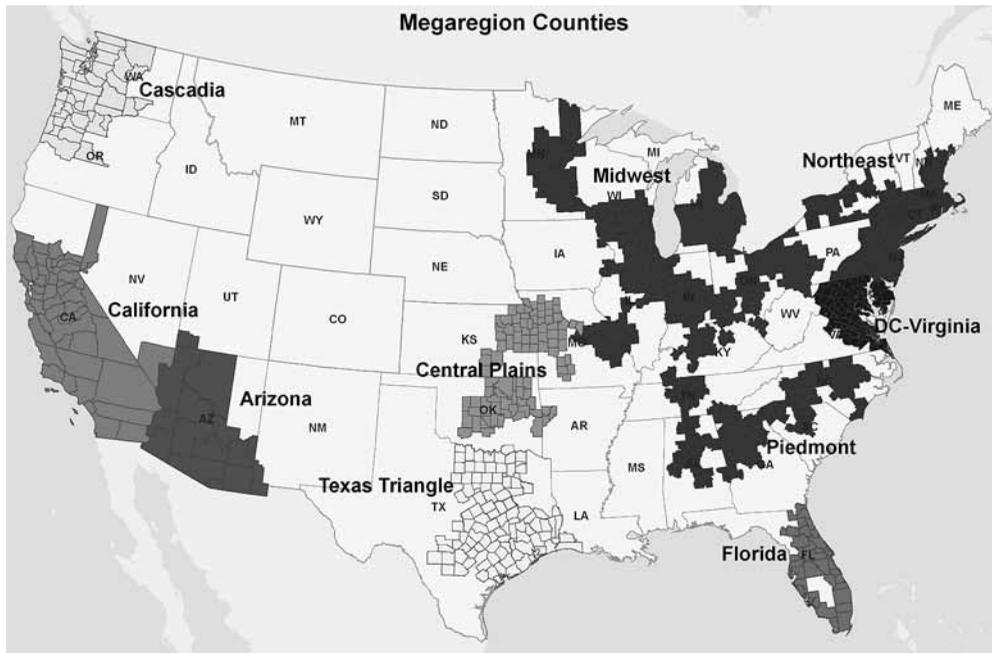


Figure 1 Megaregions in the United States

Source: Ross, Catherine (2009), 'Delineating existing and emerging megaregions', July. Funded by the Federal Highway Administration, USDOT.

Cities anchor megaregions and form an economic unit in world markets that serve a vital and expanded role in the functioning of countries, communities and regions. Megaregions offer a framework for cooperation, planning and development, funding decisions and policy priorities within which to direct infrastructure investment and enhance competitiveness. They provide a mechanism linking infrastructure with economic growth focused on productivity, transformation, mobility, sustainability and access across borders including national ones. The positioning and targeting of selected trade corridors, gateways and economic and population centres has the potential to change the competitive posture and positioning of geographic areas. Tomorrow's cities and regions may well enjoy the benefit of coordinated transportation, housing and energy policies and improved natural resources management, as a result of greatly expanding their sustainability footprint.

Tomorrow's competitive cities will offer more extensive public transit systems and greater modal diversity relying on the use of cleaner fuels, improved technology, greater connectivity and increased reliability of transport systems. Different financial tools and strategies are required to fund this infrastructure. In concert with the private sector, cities can implement differential financial initiatives, including concessions, Build-

Operate–Transfer (BOT) schemes, tax increment financing (TIF), transit-oriented development (TOD), infrastructure banks, tolling systems and more efficient service delivery platforms. However, the greatest opportunities, creating even closer linkage between urban development, natural resource management, land-use planning and infrastructure investment, may have yet to unfold. As the discussion of climate change moves forward, the inclusion of cities and local governments that reduce emissions could create a larger dependable revenue stream. These resources may be used to finance sustainable infrastructure development in cities, regions and towns.

There is substantial indication that the preference for reliable transportation will increase among urban dwellers as well as suburbanites given the distance between their places of residence and employment. In 2050, two-thirds of US population will live in one of the 10 megaregions and 80% of the nation's gross domestic product will be generated in the megaregion (Regional Plan Association, 2006; Amekudzi and Ross, 2007). The megaregions will become an appropriate planning framework for sustainable development and a national high-speed rail network.

In order for megaregions to be economically successful, adequate freight transportation infrastructure is imperative. The Federal Highway Administration (FHWA) states that

the efficient movement of goods via freight transportation infrastructure is essential because freight transportation may significantly affect economic productivity. In particular, the transportation infrastructure that connects metropolitan areas moving goods by truck, rail, water, air, and other modes is critical for the nation's economic competitiveness. (FHWA, 2007)

To ensure these movements operate more efficiently will require reducing the number of cars and trucks operating in critically congested freight corridors. In order to accomplish this, alternative person transportation will have to be expanded including bus, bus rapid transit, commuter rail and high-speed rail. The shift to rail will shift passengers to alternatives, thereby creating more highway space for freight. A macro analysis of the economic interaction between megaregions identifies critical national freight corridors (FRA, 2010). In addition, an analysis of the economic interaction between foreign markets identifies transportation improvements necessary for global trade. By 2035, however, each of the megaregions is expected to have high recurring congestion throughout the entire region. The economic specialisation of metropolitan centres and the distribution of commodities between these centres of activity will help structure and identify transportation investment priorities.

## **The rise of high-speed rail**

High-speed rail may enhance the potential advantages of cities of all sizes. It increases accessibility and stimulates economic activity within the geographic boundaries and

may well serve as a primary lever to reposition the economy of cities and regions. The Federal Railroad Administration (FRA) launched the High Speed Intercity Passenger Rail (HSIPR) Program in June 2009. The HSIPR Program in the United States is designed to connect communities end-to-end through the construction of an efficient network of passenger rail corridors. The Program includes the construction of new HSR corridors to improve passenger transportation, upgrade existing intercity passenger service and build the foundation for future HSR services through planning studies and selected projects in the short term. In the long term it will connect major population centres 100–600 miles apart. This will entail extensive collaboration between the federal government, the states, railroads and other key stakeholders (FRA, 2010).

While there are not many, there have been some studies that examine travel demand modelling on a higher scale than the metropolitan level. For example, Zhang and Chen (2009) used a megaregion approach to project future travel demand and choice of transportation modes in the Texas Triangle and included four metropolitan areas. The model was based on behavioural assumptions related to income growth and the demand for mobility, per-capita time and income budgets individuals allocate



Figure 2 High-Speed Rail Plan (US DOT Federal Railroad Administration)

Source: National Rail Plan, September 2010, US Department of Transportation, Federal Railroad

to travel. The authors forecast growth in total mobility demand in the Texas Triangle region between 2000 and 2050. The analysis included highway, HSR and airline modes. They recommended investment in HSR. Vovsha and Bradley (2006) have presented an activity-based model for the New York megaregion suggesting that large detailed transportation models may be successfully built as activity-based models. These efforts offer future directions for the modelling and travel forecasting that must undergird passenger projections and planning for HSR.

High-speed rail is the most visible form of new technology accompanying the transformation to an information-based economy, and it is likely to have the greatest impact on spatial development. Since high-speed rail is a relatively new technology, the full range of benefits and effects of the service level and station locations are not readily identified. The volume of material explicitly documenting economic benefits is also somewhat limited. However, this paucity of definitive economic information is not so different than that confronting the US when it made the decision in 1947 to invest in a vast interstate highway system. None will deny that investment has spurred the tremendous economic success and competitive advantage enjoyed by the United States.

The experience in other countries suggests a significant role for HSR given its propensity to increase property value, enhance mobility and expand and enhance employment and economic activity in addition to reinforcing existing economic nodes and spatial configurations. The United States now finds itself in the position of having to redevelop its economy, focusing on clean energy, green jobs, sustainability and competitiveness. Development effects and possibilities associated with high-speed rail are well-suited as a primary lever in accomplishing these objectives. The development effects of HSR stations are most clearly associated with a strong regional economy and good links with other transportation modes.

A number of cities and regions are providing leadership and embracing high-speed rail above and beyond the direction and resources that are being put forth by the national government. For example, regional agencies in the western half of the United States have formed an alliance to develop a corridor between Denver and Los Angeles including Las Vegas, Salt Lake City and Phoenix. In California, Proposition 1A – The Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century – was passed, authorising the issuance of \$9.95 billion of general obligation bonds to partially fund a \$40-billion, 800-mile high-speed train under the supervision of the California High-Speed Rail Authority. High-speed rail may enhance the potential advantages of cities of all sizes because it increases accessibility and stimulates economic activity within the geographic boundaries and may well serve as a primary lever to reposition the economy of cities and regions. The full range of benefits and effects of the service level and station locations are not readily identified.

These and other anticipated links are the result of initiatives taken by multiple

jurisdictions to invest in HSR based on a common commitment to connectivity. In Washington state, money is being invested in the Portland–Seattle–Vancouver corridor and Florida is investing 2.1 billion in the Miami–Orlando–Tampa corridor. The South Eastern High-Speed Rail (SEHSR) project corridor now extends approximately 168 miles from Richmond, Virginia, to Raleigh, North Carolina, as a result of the FRA requesting that the Tier II environmental document include the Richmond (at Main Street Station)–Petersburg portion of the corridor. The extension is being funded by local funds the Virginia Rail Enhancement Fund Grants.

The success of these initial ventures will have a tremendous influence on the rate of adoption of HSR transportation in the US and on the development of a truly national high-speed rail programme. The international experience includes both successes and failures, including the recent necessity for the Taiwanese government to take over Taiwan high-speed rail after a short three years in operation. This is similar to the European Union's decision to allow the UK to bail out London & Continental's Railways and the government's efforts to develop a public private partnership (Freemark, 2009).

The government of the United States has signalled its commitment to the development of high-speed rail with the announcement of new real initiatives in 2010. President Obama shared his vision and allocated \$8 billion in federal money as a 'down payment' on creating speedier passenger train service. 'High-speed rail is long overdue, and this plan lets American travellers know that they are not doomed to a future of long lines at the airports or jammed cars on the highways,' Obama said (Allen, 2010). Table 1 shows the awards made by the federal government for high-speed rail construction projects in the United States.

**Table 1 High-speed rail awards**

West region	2,942,000,000
Midwest region	2,599,600,000
Southeast region	1,870,000,000
Northeast region	485,000,000
Additional awards	26,650,000

## Conclusion

New capacities and capabilities are demanded of transportation systems worldwide and this is true of the United States as well. The role of technology, the demands for more sustainable mobility systems, the demand for clean energy sources more friendly to the environment, emerging megaregions and markets all suggest a need for new, improved and more efficient mobility systems. These demands coincide with our need to improve safety and economic competitiveness. A number of states and

regions and the federal government have initiated the groundwork for development of a national high-speed rail system in the United States. These projects provide greater mobility and enhance the competitiveness of the megaregions in which they are located.

Across the United States, current transportation infrastructure is already operating at or near capacity, and the demand for capacity is only expected to increase as the economy and population grow. Given a limited amount of resources, it is crucial to understand the economic and transportation needs and interactions in the United States in order to prioritise transportation investments. Greater coordination will be required at the scale of the megaregion to successfully implement transportation investment priorities and ensure future success and competitiveness as the United States moves toward a national surface transportation system that is more efficient, more effective and more sustainable.

## References

- ALLEN, G. (2010), 'Obama Announces High-Speed Rail Projects', NPR, 10 January, [www.npr.org/templates/story/story.php?storyId=123081477&.ft](http://www.npr.org/templates/story/story.php?storyId=123081477&.ft) (accessed August 2010).
- AMEKUDZI, A., THOMAS-MOBLEY, L. and ROSS, C. (2007), 'Transportation planning and infrastructure delivery in major and megacities', *Transportation Research Record, Journal of the Transportation Research Board*, No. 1997, 17–23.
- BIRCH, E. (ed.). (2009), *The Urban and Regional Planning Reader*, New York, NY, Routledge.
- FHWA (FEDERAL HIGHWAY ADMINISTRATION) (2007), *The Freight Analysis Framework (FAF)*. United States Department of Transportation, Washington, DC, Government Printing Office.
- FRA (FEDERAL RAILROAD ADMINISTRATION) (2010), *National Rail Plan: Moving Forward*, United States Department of Transportation, Washington, DC, Government Printing Office.
- FREEMARK, Y. (2009), 'Giving Away the Crown Jewels', *The Transport Politic*, <http://www.the-transportpolitic.com/2009/05/15/giving-away-the-crown-jewels> (accessed August 2010).
- REGIONAL PLAN ASSOCIATION (2006), *America 2050: A Prospectus*, New York, NY, Regional Plan Association.
- ROSS, C.L. and WOO, M. (2009), 'Identifying megaregions in the US: implications for infrastructure investment', in Ross, C.L. (ed.), *Megaregions: Planning for Global Competitiveness*, Washington, DC, Island Press.
- ROSS, C.L., WOO, M., BARRINGER, J., LEONE DE NIE, K., WEST, H. AND DOYLE, J.L.H. (2008), *Identifying Megaregions in the US: Implications for Infrastructure Investment*, paper presented at the ACSP-AESOP 4th Joint Congress, Chicago.
- UNITED NATIONS (2010), *State of the World's Cities 2010–2011*, Nairobi, UN-Habitat.
- VOVSHA, P. and BRADLEY, M. (2006), 'Advanced activity-based models in context of planning decisions', *Transportation Research Record: Journal of the Transportation Research Board*, No. 1981, 34–41.
- ZHANG, M. and CHEN, B. (2009), *Future Travel Demand and its Implications for Transportation Infrastructure Investments in the Texas*, Austin, TX, Center for Transportation Research University of Texas at Austin.

Vincent Goodstadt

## Policy & Practice

# *Comment: the strategic planning context for high-speed rail*

Catherine Ross addresses the global planning challenge – how are we to manage large-scale urbanisation which is inexorably resulting in the emergence of mega-urban regions? Megaregions are now the main concentrations of population in the developed economies. In the UK, over 60% of the population is focused on two megaregions, sometimes referred to as the London Supernova and the Central Constellation of England (Wong et al., 2008), while in Europe, about 40% of the population is focused on the ‘Pentagon’ megaregion highlighted by Ross, which covers only 20% of the area but has about 60% of the economic output of Europe.

Although these megaregions are the drivers of economic growth, they are, as Ross implicitly argues, not sustainable (e.g. in terms of carbon footprint and travel modes). Nor are they efficient economically, failing to deliver their full competitive potential (e.g. in terms of the working of labour and housing markets). They are also central to environmental and social challenges, for example, in terms of their dependency on short-haul air flights and their social imbalances. On the other hand, if properly managed (i.e. planned), megaregions have the potential to deliver more sustainable forms of urban development, for example reducing greenhouse gas emissions. At present, however, megaregions are part of the planning problem globally, when they should be part of the solution.

It is within this context that HSR policies and programmes should be viewed. On the one hand, megaregions are not dependent upon HSR for their continued growth or as the focus of national competitiveness. On the other hand, without the ‘re-engineering’ of these megaregions, they will increasingly contribute to the three global planning challenges set out at the 2008 Nanjing World Urban Forum (i.e. the scales and rates of change of urbanisation, climate change and poverty).

Currently there are over 10,000 km of HSR routes in Europe with plans to expand this to around 20,000 km in 2020 and 30,000 km in 2030 (European Commission, 2010, para. 5.2). These proposals are based upon a strategy for promoting greater social cohesion and territorial integration between the core and periphery of Europe. In particular HSR is seen as having the potential to contribute to maintaining the competitiveness of the Core (i.e. the Pentagon) and to unlocking the potential of the peripheral areas by establishing greater links. In the UK, HSR investment is seen by the Secretary of State for Transport as a ‘strategic project that will make rail the mode of choice for most inter-city journeys within the UK, and for many beyond’ (Hammond, 2010).

This view is supported by a growing body of European experience and study. In northern France it has been an instrument of regional policy for stimulating depressed older industrial areas. In the UK, the proposed HS2 line from London to underperforming northern regions of England is being promoted in part to transform these regional economies. Economic benefits clearly vary according to circumstances, but a recent study of the impact of the HS2 line from London to Birmingham concluded that wider economic benefits arising from agglomeration (e.g. a greater pool of suppliers, cluster effects, etc.) and labour market efficiencies enhanced by 50% of the conventional user benefits (e.g. travel costs, accident reduction, etc.) would accrue from a new HSR line (Steer Davies Gleave, 2008).

There are also specific transportation benefits associated with HSR. In Southwest Europe, new high-speed lines are expected to release substantial capacity for freight transport on existing conventional lines, as well as competing with air transport. In France, the South East TGV to Lyons and Thalys in the Netherlands have in effect replaced short-haul air, with significant environmental benefits. Of course, HSR is not always practical, but studies have demonstrated that significant net benefits arise from HSR services over equivalent conventional services in terms of energy consumption and greenhouse gas emissions per passenger-km in addition to the benefits that arise, for example, from the net effects of modal shift (Network Rail, n.d.).

There are, however, dangers that HSR on its own will be associated with the diversion and displacement of investment from more peripheral areas within any region resulting in even greater concentration of economic activity in major growth points within the region to the disadvantage of other areas. To avoid such collateral damage, HSR investment needs to be supported by a framework of complementary action if it is to deliver network benefits, to be related to economic and social priorities and to promote accessibility and mobility throughout the megaregion (Alan Wenban-Smith, 2009). This requires both transport action (e.g. station design and multi-modal network strategies) and non-transport policies and programmes (e.g. the identification of potential sectors and institutional capacity). In addition, it needs to be recognised that some of the best investments that can be made are ‘in smaller-scale projects – addressing, at local level, congestion, air quality, environmental issues, road safety and public wellbeing in our urban areas’ (Hammond, 2010).

In this respect there are a series of common issues emerging in terms of configuring HSR – for example, the choice between outer suburban ‘Parkway’ and inner city locations, the balance between inter-regional and international links, integration with local transport and the focus of economic specialisation. To address these issues and set out a framework of complementary action requires HSR investment to be set within a megaregional planning framework. In Europe these are in effect the national spatial strategies. Therefore, HSR is not the magic bullet of strategic planning. However, set within megaregional planning frameworks, HSR can be a

critical part of the armoury of planning action which addresses the global planning challenges arising from the scale, pace and form of urbanisation.

## References

- EUROPEAN COMMISSION (2010), *High-speed Europe. A Sustainable Link between Citizens*, Luxembourg, Publications Office of the European Union.
- HAMMOND, P. (2010), 'Conservative Party Conference Speech', [http://www.conservatives.com/News/Speeches/2010/10/Philip\\_Hammond\\_Government\\_announces\\_plans\\_for\\_next\\_phase\\_of\\_high\\_speed\\_rail.aspx](http://www.conservatives.com/News/Speeches/2010/10/Philip_Hammond_Government_announces_plans_for_next_phase_of_high_speed_rail.aspx) (accessed 16 March 2011).
- NETWORK RAIL (n. d.), 'Comparing the environmental impact of conventional and high-speed rail', New Lines Programme, supporting document, [http://www.networkrail.co.uk/documents/About%20us/New%20Lines%20Programme/5878\\_Comparing%20environmental%20impact%20of%20conventional%20and%20high%20speed%20rail.pdf](http://www.networkrail.co.uk/documents/About%20us/New%20Lines%20Programme/5878_Comparing%20environmental%20impact%20of%20conventional%20and%20high%20speed%20rail.pdf) (accessed 16 March 2011).
- STEER DAVIES GLEAVE (2008), 'HIGH SPEED 2: Economic and Regeneration Impacts for Birmingham', final Report prepared by Steer Davies Gleave for Greengauge 21 and Birmingham City Council, 28–32 Upper Ground, London SE1 9PD, Steer Davies Gleave.
- WENBAN-SMITH, A. (2009), 'Complementary measures to facilitate regional economic benefits from High Speed Rail', final report prepared by Alan Wenban-Smith, Urban and Regional Policy for Greengauge 21, [www.greengauge21.net/publications/complementary-measures-to-facilitate-regional-economic-benefits-from-high-speed-rail/](http://www.greengauge21.net/publications/complementary-measures-to-facilitate-regional-economic-benefits-from-high-speed-rail/) (accessed 28 March 2011).
- WONG, C., SCHULZE BAING, A. and RAE, A. (2008), *Uniting Britain: The Evidence Base – Spatial Structures and Drivers*, London, RTPI.

Peter Hall

## Policy & Practice

# *Comment: high-speed rail – will it play in Peoria?*

Catherine Ross's lead paper is timely because it comes at a critical time in American transportation history, comparable to the mid 1860s which saw the launch of trans-continental railroad projects, and the mid 1950s which marked Congressional approval for the Interstate Highway Program. However, there is a key difference: in those two previous eras the United States led the rest of the world in the ambition and scale of its endeavour, while now it conspicuously lags. Not only have Japan, Europe, Taiwan and the Republic of Korea leapt ahead with their programmes, China has suddenly leapt forward from a standing start, completing over 4600 miles of high-speed railway by the end of 2010. In contrast, America has the Acela, a tilting train running over nineteenth-century tracks between Washington, New York and Boston, achieving a maximum speed of 150 miles an hour. As she explains, that should soon change with dozen schemes at advanced stages of preparation.

The point of Ross's paper, however, is that this time is different: the role of high-speed rail will be to serve a handful of densely populated megaregions, covering only 26% of the land area but incorporating no less than 74% of the population of the continental United States (Hagler, 2009). The reason is that the spatial scale of these regions is ideally suited to HSR as a competitor to air, with major cities spaced along linear corridors over distances up to 500 miles, served by some of the world's most-trafficked (and hence most-profitable) short-haul air corridors. Elsewhere – first in Japan and now in Europe – HSR has quickly seized the lion's share of traffic along analogous corridors: Tokyo–Nagoya–Osaka, Paris–Lyon–Marseille, London–Manchester, Paris–Brussels–Amsterdam and Madrid–Zaragoza–Barcelona (Hall, 2009). There is no reason to believe that the result will be different on corridors such as Washington–New York–Boston or San Francisco–Los Angeles.

However, not every such corridor is the same. Michel Leboeuf, who directs major projects for SNCF, usefully distinguishes two types of high-speed operation in Europe: a southern European model, in Spain, France and peninsular Italy, where trains run at maximum speeds of around 200 miles per hour non-stop over long distances through relatively empty territory, and a northern European model, in the UK, Benelux and Germany, where trains stop much more frequently at intermediate stations serving considerable regional populations and so achieve lower average speeds. The extraordinary contrast on the new *Ligne à Grande Vitesse Est-Européenne*, where trains from Paris to Frankfurt travel non-stop across France but then halt at a series of closely spaced intermediate stops in Germany – Saarbrücken, Kaiserslautern, Mannheim – encapsulates this difference.

This is important for the United States, for – once away from the two coastal corridors – the US has a southern European distribution of urban population: in fact, a parody of it, in which major cities – not as a rule very large by international standards – are separated by many hundreds of miles of thinly populated farmland or desert. That means, first, that the opportunities for high-speed rail are limited to internal connections within these megaregions, not between them; second, that even there the opportunities may be marginal. Ross instances the Central Plains megaregion embracing three Metropolitan Statistical Areas: Kansas City (2000 Census population, 1.8 million), Tulsa (860,000) and Oklahoma City (1.1 million). Compare the position in Europe, where the main high-speed corridors connect mega-city regions – equivalent to Consolidated Metropolitan Areas in the United States – that are far bigger: Paris (15.7 million)–Central Belgium (7.8 million)–Randstad Holland (8.6 million) or Rhine-Ruhr (11.7 million)–Rhine-Main (4.2 million)–Central Switzerland (3.5 million) (Hall and Pain, 2006, Chapter 2).

That is why, despite the ambitions of politicians, the market potential for high-speed rail in the United States may be less than in the other countries that have made it work for them. Of course, this depends on a number of factors that cannot accurately be forecast, such as rises in oil prices and the imposition of higher air travel taxes as now evident in Europe. And there is some anecdotal evidence from Europe that earlier conventional estimates of rail competitiveness against air – typically, up to a 500-mile trip between cities – may change to rail's advantage, due to congestion both on the air corridors and on the ground links between city centres and airports. But as the high-speed rail revolution at last reaches American shores, it is likely to remain confined there.

## References

- HAGLER, Y. (2009), *Defining U.S. Megaregions*, New York, Regional Plan Association.
- HALL, P. (2009), 'Magic carpets and seamless webs: opportunities and constraints for high-speed trains in Europe', *Built Environment*, **35**, 59–69.
- HALL, P. and PAIN, K. (2006), *The Polycentric Metropolis: Learning from Mega-City Regions in Europe*, London, Earthscan.

Ethan Seltzer

## Policy & Practice

### *Comment: megaregions and nations*

Catherine Ross provides us with a useful summary of the emergence of megaregions globally, and associated with them, the application of high-speed rail as a means for making connections in the context of a new economy. In fact, in her lead paper in this Policy & Practice forum, she portrays high-speed rail as ‘the most visible form of new technology accompanying the transformation to an information-based economy’, and outlines both the scope of the challenge facing America in this chase for global competitiveness, as well as the degree to which other countries and regions are already far ahead. She concludes that greater coordination will be required at the scale of the megaregion in order for the United States to get in the game.

At a recent conference at the University of Victoria,<sup>1</sup> a discussion of Cascadia turned to the question: who, if anyone, would stand to gain from advancing the idea of Cascadia (the Pacific Northwest coast of North America extending from northern California to southeastern Alaska)? In essence, the question had to do with whether investing time and energy in the idea of Cascadia was worth the trouble, and justifiable given a lengthening list of other concerns. One commenter wondered whether, in fact, pursuing a ‘Cascadian’ frame of reference was really just the vanguard of an American plot to undermine Canadian sovereignty.

Conspiracy theories aside, the question is a good one: why Cascadia? What can and should it do that cannot be done at other scales or in other contexts? What benefits flow from thinking as Cascadians? Finally, if we succeed at creating HSR in Cascadia, linking the principle metropolitan regions centred on Portland, Seattle and Vancouver, BC, what changes? What new opportunities open up, and what unmet needs get either met or set aside, once and for all?

One of the central contemporary answers to these questions, consistent with Ross’s analysis, concerns conferring greater global competitiveness on the major cities and metropolitan areas of Cascadia, and by extension on the US and Canada. The thinking here is that networking the metropolitan regions of Cascadia, and improving linkages between them with investments in infrastructure like (although not limited to) high-speed rail, will create a globally relevant and critical mass of economic and innovating activity, and match the investments and thinking being put forward, in particular, by the European Union (EU) and the Chinese.

However, the networking of metropolitan regions in Europe is part of an explicit

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1 Fifth Annual Cascadia Critical Geographies Mini-Conference, 29–30 October 2010, University of Victoria, Victoria, BC; [www.chrdi.org/CCGMC/Welcome\\_CCGMC\\_10](http://www.chrdi.org/CCGMC/Welcome_CCGMC_10) (accessed 16 November 2010).

spatial development policy that concerns linking growth poles and lagging regions. The networking of Chinese cities in regions has to do with managing the unbelievable pace of urbanisation in that nation, and the unimaginable urbanisation yet to come. In both cases, the development of megaregion strategies is part of a conscious effort to rethink much broader territories for national or, in the case of the EU, transnational purposes.

The lack of a similar set of national or transnational purposes in Cascadia, and in other proposed megaregions in the United States and North America, and the very apparent lack of effort at the national or transnational scale to develop them leaves us with a lot less to work with than our international competitors. In other words, simply managing the physical linkages is not the same as having a megaregional development strategy able to contribute to a more globally competitive, let alone sustainable, nation.

At present, although we have international examples to learn from, we have yet to see the emergence of a national dialogue about development and the ways that high-speed rail in megaregions can and should be a catalyst for the development and competitiveness we want. In short, we assume a lot when we focus on megaregions in the United States, and we assume even more when we attempt to justify high-speed rail development based on the existence and global competitiveness of megaregions. Simply stated, we have work to do before we can even explain why we are pursuing megaregion-scale strategies, particularly infrastructure-based strategies, first and ahead of all others.

This returns us to the question that came up at the conference in Victoria: why Cascadia? The answer to that could take a number of forms. We share a bioregion, one under stress, and working at the scale of Cascadia on such things as species recovery makes tremendous sense. In addition, we are known for a number of common cultural characteristics. Throughout Cascadia, we expect a life lived close to nature and the working landscape, and it is a value backed up in innovative public policy and public investment. Fundamentally, the world views us as a relatively unitary place despite the grain provided by jurisdictional and national boundaries. We can, in fact, gain by thinking and acting as a region.

However, we would be making a tremendous mistake if we did not recognise that operating at the scale of Cascadia by no means minimises the roles for other scales and concerns. We have to understand and embrace scale from both ends of the spectrum, always. Further, given the head start for institutional relationships embedded in other scales, Cascadia will have to first make its case not on the basis of being globally relevant, but on the basis of assisting smaller and more local scales with becoming globally relevant. Local, state and national are the default scales long before we get to Cascadia, particularly with weak to mostly non-existent federal and transnational strategies for embracing megaregions.

What next? We need to stop discussing megaregions as individual places, and start promoting a dialogue about megaregions as a national and continental building block. This is a harder discussion to have, but it is the one that makes megaregions a reason for action. Rather than speaking of ‘transport and megaregions’, we are better served by probing ‘transport and the nation(s)’, and through that discussion finding the rightful and compelling place for megaregions as the loci for thought and action.

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