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NEW TRB SPECIAL REPORT

Interregional Travel

A New Perspective for Policy Making

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Travelers at New York's Pennsylvania Station. Approximately three-quarters of all long-distance travel are between metropolitan areas 500 or fewer miles apart.

Most long-distance trips begin in one metropolitan region and end in another less than 500 miles away. These interregional trips account for approximately three-quarters of all long-distance travel.

Although local travel has been the subject of considerable study and is relatively well understood by planners and public officials concerned with urban transportation, several recent developments have directed attention to the interregional segment of travel. Among them are California's plan to invest more than \$60 billion in a new high-speed rail line connecting the state's southern and northern cities and the emergence of express curbside buses in the heavily trafficked Northeast Corridor (NEC), which spans Boston, Massachusetts, to Washington, D.C.

These and other cases in which new transportation services and systems are being considered—sometimes involving large public investments in long-lived infrastructure—require a thorough understanding of interregional travel demand, service options, and corridor traffic and trip-making patterns.

TRB Special Report 320, *Interregional Travel: A New Perspective for Policy Making*, reviews the demand for interregional travel in the United States and the uncertainties that arise in supplying transportation services and infrastructure to accommodate the demand. The study committee (see box, page 42) considered relevant experience in other countries in serving interregional travel demand, especially by providing passenger train service.

The findings of the committee suggest that appropriate analytical tools and up-to-date data on long-distance travel patterns are lacking in the United States, complicating decisions about investments in the nation's interregional corridors. In addition, the study identifies significant gaps in decision-making capacity, largely because transportation funding sources and institutions do not align well with the country's interregional corridors, which connect and cross multiple metropolitan areas and states. The committee recommends several initiatives to fill these gaps.

Changing Travel Patterns and Technologies

The American Travel Survey (ATS), conducted in 1995, is the primary source of information on long-distance travel in the United States. Like its predecessor in 1977, the survey revealed the dominance of the private automobile in long-distance tripmaking, especially for distances under 500 miles.

A long-distance travel survey, if conducted today, likely would reveal many travel patterns not observed in the ATS, as would be expected after two decades of demographic, economic, and technological change. Since 1995, the U.S. population has increased by more than 20 percent; grown older, as indicated by the median age—34.3 years in 1995 and 37.6 years in 2013; become more concentrated in metropolitan areas; and continued to shift further to the South and West. Average household size has declined, as the number of households with children has grown at a slower rate than that of households of couples and of individuals living alone.

Transportation technologies also have changed—dramatically in some cases. Advances in in-vehicle electronics have made travel by automobile more reliable and comfortable for longer-distance trips, not only by assisting with driving functions—for example, adaptive cruise control and lane-keeping systems—but also by providing onboard entertainment and navigation assistance.

The commercialization of the Internet and the introduction of the smartphone and other electronic and telecommunications devices have created new means of marketing and shopping for airline, train, and bus fares—for example, through travel agency websites and online ticketing. Mobile computer and communications technologies also have allowed a more productive use of time while traveling. These technologies may be influencing travelers' choice of modes—and even their overall demand for travel—with a growing number of options for working remotely and staying connected to friends and family.

Intercity Bus Renaissance

The recent proliferation of intercity express bus services illustrates the changes that have been taking place in interregional travel—and by extension, the uncertainties that decision makers face when considering investments in long-lived transportation infrastructure, such as high-speed railways.

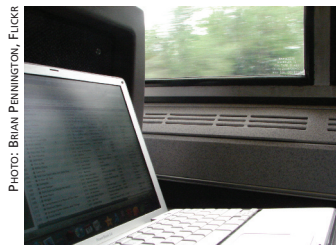
During the 1990s, the nation's intercity bus industry was in the midst of a long-term decline in ridership. Today, the industry has been rejuvenated by bus companies providing nonstop service between the downtowns of major cities.

The express bus appears to have filled a void in the low-fare and shorter-haul interregional market. The services accommodate mostly solo travelers who lack access to automobiles, find driving too expensive or a car unnecessary at the destination, or want to make enjoyable or productive use of travel time through the onboard amenities and the uninterrupted use of portable electronic devices.

Public officials noticing this renaissance may question the need for capital-intensive transportation investments to compete with the low-cost private buses. Or they may view this development as indicative of more people seeking transportation alternatives to the automobile, and thus as a signal for investing in other options, such as intercity train service and priority access lanes and terminals for intercity buses.

Limited Passenger Rail Options

In most of the country's interregional corridors, intercity trains operate on freight lines. Corridor investments to increase passenger train speeds and frequencies are generally not attractive to the private freight railroads that own these lines and may be undesirable if they hinder the efficient movement of freight.



Laptops and smartphones allow opportunities for productive travel; carriers offer Wi-Fi and device charging stations and outlets.

Passengers board a Megabus. Downtown-to-downtown intercity bus services have filled a void in the low-fare and shorter-haul interregional market.



With skeletal passenger train service and limited prospects for introducing passenger rail service with competitive speeds and frequencies on heavily trafficked freight lines, few corridors other than the passenger-oriented NEC have developed a large ridership base. The absence of a well-established ridership increases the uncertainty of investing in competitive service levels, particularly when a large commitment of public funds is needed for infrastructure development.

The NEC is the only interregional corridor with train frequencies and schedule times that can compete successfully for market share with airlines, buses, and automobiles. The NEC accounts for most interregional train ridership in the United States.

The 400-mile corridor, with New York City at the center, contains many large metropolitan areas that are closely spaced and positioned linearly, so that multiple city-pair markets can be served with frequent trains on a single line. Also fundamental to the success of train service in the NEC is that Amtrak controls the electrified right-of-way, which carries little freight and is used mainly by local commuter and intercity passenger trains.

Learning from Experience Abroad

The scarcity of passenger train service in the United States outside of the NEC contrasts sharply with the widespread availability of service in Europe and Japan. Because Japan and most European countries are geographically compact, passenger rail networks

can connect each country's major cities in ways that are not practical in the continental-size United States.

In the past 50 years, the national governments of Europe and Japan have made sustained investments to create modern and increasingly integrated rail networks to accommodate fast, frequent, and reliable passenger trains. Consequently, most European and Japanese investments in new or substantially upgraded passenger rail services, such as high-speed rail, are made in markets already demonstrating high rail ridership.

In this regard, the European and Japanese experience bears directly on the NEC, which has a well-established intercity train service and known ridership demand. But the European and Japanese experience in providing passenger rail in established markets is less relevant to investing in passenger rail where train service is sparse and ridership is low or nonexistent, as characteristic of most U.S. corridors..

Transportation planners in California, for example, have recognized that improving passenger rail service by increasing train speeds and frequencies on the main lines of freight railroads is not a practical option for building a strong ridership base. Therefore the state is planning to build a new high-speed trunk line devoted to passenger service. The investment is being informed by evaluations of airline traffic and stated preference surveys rather than the traditional approach of examining the demand revealed by existing train ridership.



A Shinkansen bullet train enters the station in Yamaguchi Prefecture, Japan. The Shinkansen reduces travel time between major cities such as Hiroshima and Tokyo by nearly half, compared with car travel.



A rendering of California's planned high-speed rail service.

The NEC's Uniqueness

The geographic, demographic, and travel demand circumstances of the NEC set it apart from other U.S. interregional corridors. The NEC is characterized by the following:

- ◆ Numerous large metropolitan areas in the region that are
 - Well connected economically and socially—this creates densely trafficked interregional rail, air, and highway routes;
 - Located within 100 to 300 miles of each other and positioned in a linear fashion that suits service by a single rail line;
 - Served by extensive public transit systems capable of providing fast, convenient access to downtown train and bus stations; and
 - Centered on cities with downtowns that are major origins and destinations for interregional travelers;
- ◆ An electrified rail right-of-way devoted to passenger rail and able to accommodate frequent, fast trains without being encumbered by freight trains;
- ◆ Rail and bus ridership levels comparable with those of corridors in countries that have made sustained investments to develop competitive rail service—in some cases, by investing in high-speed trains;
- ◆ Several major airports in the area, with regulatory limits on daily flights and a general difficulty in expanding airport and airway capacity; and
- ◆ A transportation infrastructure that spans numerous states—too many to generate a highly coordinated program contributing to the development of infrastructure but too few to have strong national-level support.

Because of these distinct circumstances, as well as a location in one of the country's most populous and heavily trafficked regions, the NEC presents far less uncertainty about the benefits from potential investments in passenger rail, including high-speed rail. Clearly the NEC should be treated differently from other corridors in terms of the scale and timing of the resources made available for assessing and meeting its transportation investment needs.

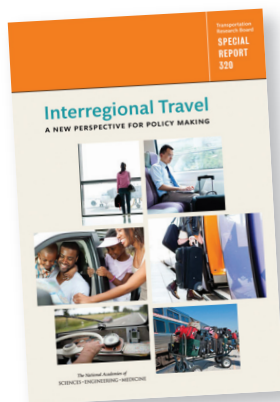
Corridors and Institutions

As evident in the multistate NEC, the planning and development of interregional corridors are complicated by the many public and private entities responsible for supplying transportation services and infrastructure. Yet even when a corridor lies within a single state, much of the transportation infrastruc-

Economically and geographically, the metropolitan regions in the Northeast Corridor are well suited for intercity passenger rail.



PHOTO: LEE CANNON, FLICKR



TRB Special Report 320, *Interregional Travel: A New Perspective for Policy Making*, is available from the TRB online bookstore, <https://www.mytrb.org/Store/Product.aspx?ID=8098>; to view the book online, go to www.trb.org/Publications/Blurbs/173764.aspx.

ture is funded and planned by mode-specific programs and agencies.

In the case of highways and aviation, private individuals and companies supply the vehicles and operate the transportation services. Federal, state, and local governments have varying responsibility for funding, planning, and operating most of the fixed infrastructure of roadways, airways, and airports. In the absence of institutions and funding programs that transcend individual modes and jurisdictions, the planning and programming of transportation infrastructure cannot be expected to embody a corridorwide perspective.

History indicates that an institutional framework is essential for ensuring multimodal and multijurisdictional transportation planning. Although decades of planning and priority-setting activities by metropolitan planning organizations (MPOs) have had mixed success, MPOs generally have fostered the development of urban transportation systems to accommodate access and mobility needs from a metropolitanwide perspective.

This continuing attention, in turn, has prompted the development and refinement of standard methods for travel demand forecasting, for assessing policy and investment options, and for collecting requisite data. The federal government, which mandates the MPO process, has provided leadership and resources to aid these efforts. Interregional corridors, however, have no institutional parallels.

Recommended Actions

In contrast to the MPO process, the provision of

interregional transportation appears to lack the most basic information on travel activity and the well-honed analytical tools for transportation planning and priority setting. The absence of interregional planning and decision-making bodies that would need these data and tools on a continuing basis explains this deficiency in part.

Nevertheless, proposals for transportation investments often address interregional corridors, and some involve large, long-term commitments, like California's plan to develop a high-speed rail line. These proposals require careful analysis and planning. In addition, most large transportation investments require institutional coordination, absent in many interregional corridors.

In the committee's view, more federal attention and leadership can address the deficiency. The committee recommends that the U.S. Department of Transportation (DOT) bring about a more rational and coordinated process for developing the nation's interregional transportation systems by taking the following actions:

- ◆ Supporting the establishment of a national data program focused on observing and understanding the behavior of long-distance travelers and the transportation services available to them;
- ◆ Supporting the development and application of state-of-the-art analytical tools for planning and prioritizing interregional transportation investments; and
- ◆ Creating the incentives for states to collaborate in developing multimodal, interregional transportation planning and decision-making organizations. The incentives should allow states to choose whether to form such organizations and should provide the flexibility to structure the organizations and define their responsibilities in ways best suited to meeting corridor-specific interests and needs.

A New Perspective

The desirability of planning and prioritizing urban transportation systems from a metropolitanwide perspective was recognized 50 years ago. That was the genesis of what became the multimodal and multijurisdictional MPO process.

At times, the federal government has helped in creating and supporting interregional bodies such as the NEC Commission and the I-95 Corridor Coalition. These efforts not only offer conceptual models for coordinated transportation planning and programming but also indicate the importance of leadership by the federal government and U.S. DOT in motivating and supporting implementation. The actions recommended in Special Report 320 are intended to provide similar support and motivation.

Committee for a Study of Intercity Passenger Travel Issues and Opportunities in Short-Haul Markets

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