

II. THE CONTEXT FOR THE DISCUSSION

Interest in reforming national transportation policy could not come at a better time. The United States is currently undergoing a transformation of dramatic scale and complexity comparable to what it experienced at the beginning of the last century—another period characterized by the radical reshaping of the American landscape.

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Unlike peer countries in Western Europe and parts of Asia, the U.S. is continuing to grow by leaps and bounds. The nation surpassed 300 million in population in October 2006 and is projected to gain another 120 million people by 2050. Only China and India will experience this level of growth.

An enormous wave of immigration will continue in part to fuel this increase in population. Currently, more than 12 percent of our residents—some 35 million people—were born outside the United States, the highest share since 1920. About nine in 10 of these foreign-born residents live in the top 100 metropolitan areas. Two-thirds live in just the top 25.¹

This immigration offsets another major demographic trend. The aging of the baby boom generation will make pre-seniors this decade's fastest growing age group, expanding an amazing 50 percent in size from 2000 to 2010 with a "senior tsunami" predicted to arrive soon thereafter.²

Partly as a result of these shifts, the average U.S. household size has fallen by nearly one full person—from 3.5 in 1950 to 2.6 today and projected to drop below 2.5 by 2020.³ Nationally, the traditional married-coupled households with children declined from 43.0 percent in 1950 to just 23.1 percent today. Since 1980, the largest percent-point increase in terms of family type was in so-called "non-families"—that is, households maintained by one person living alone or with non-relatives only.



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Evidence abounds pointing to rapid changes in a more interconnected global economy—U.S. imports tripled during the 1990s and exports doubled. The share of the nation's economy attributable to international trade continues to rise and is now about one-third of GDP, up from 11 percent in 1970.⁴ Major American corporations like General Electric, Ford Motor Co., and Hewlett Packard realize at least one-third of their sales, and hold more than half their assets, in foreign countries.⁵

In addition, technological innovation has shrunk the world, exponentially reducing the costs and increasing the speed of sending goods and information. For example, an enormous container ship can be loaded with only a fraction of the labor and time needed to handle a small conventional ship 50 years ago.⁶ Parallel advances in logistics have produced ever-longer supply chains, and have made it possible for Shanghai, Shenzhen (China), and Busan (Korea) to rank among the largest ports in the world. Economists estimate that improvements such as these have reduced the cost of moving manufactured goods by an estimated 90 percent in real terms over the course of the twentieth century. They conclude that transportation costs—at least for goods—“should play an increasingly irrelevant role in the metropolitan economy.”⁷

What is clear is that, together, these demographic and economic changes have three major spatial effects on the national, inter-regional, and intra-metropolitan landscape.

1. First, rather than dispersing randomly across the globe, all this demographic and economic activity is shifting and re-aggregating in major metropolitan areas, both domestically and internationally.

At the global level, the best evidence for the continued importance of metropolitan areas lies in a simple fact: In 2006, for the first time ever, more than half the world's population lived in urban areas. But even more so than population, global economic output concentrates in major metropolitan areas. The top 30 worldwide—including Tokyo, New York, London, and Boston—generated roughly \$10 trillion in GDP in 2005, equivalent to about one-sixth of global output, despite containing just one-twenty-fifth of the world's inhabitants.⁸

The American economy is characterized by significant geographic clustering, too.

The top 100 metropolitan areas alone claim only 12 percent of our land mass but harbor more than 65 percent of our population, 74 percent of our most educated citizens,

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77 percent of our knowledge economy jobs, and 84 percent of our most recent immigrants.⁹

At the root of these agglomerations is the evolution of the American economy into a series of clusters—networks of firms that engage in the production of similar and related products services. And firms within these clusters crave proximity—to pools of qualified workers, to specialized legal and financial services that often require face-to-face interaction, to infrastructure that enables the mobility of people and goods, and to other firms so that ideas and innovations can be rapidly shared. Density (the essence of urban and metropolitan places) matters even more in the knowledge economy than it did in the industrial economy.

As a result of these assets and agglomerations, the 100 largest metro areas generate 75 percent of the nation's gross domestic product, reinforcing their critical role as engines of the U.S. and global economy .

Metropolitan areas also represent the geographic reality of how our labor and housing markets are organized.

Metropolitan areas are labor markets, in that the vast majority of people who live within a given metropolitan area also work there. In 2000, 92 percent of workers living

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in the nation's 100 largest metropolitan areas commuted to jobs within their own metropolitan area. Yet commuters frequently cross municipal and county borders within metropolitan areas on their way to work. Roughly 30 percent of workers in major metropolitan areas commute to jobs outside their county of residence, a share that has steadily increased over time.¹⁰

Metropolitan areas are also housing markets, in that when households move, they tend to stay within their home market. In the 100 largest metropolitan areas, about 70 percent of households who move within a given year select a residence elsewhere in the same metropolitan area.¹¹

2. The second spatial effect of the changing demographic and economic landscape is the increasing primacy of certain ports of entry and key corridors that link major metropolitan areas to each other and the rest of the nation.

The oft-noted effect of the nation's economic transformation is the increase in freight and goods coming in and out of the nation's ports and the trucks and trains distributing those goods throughout the country. For example, in 2005 there were 1.9 million tractor trailer trucks in the U.S., up from 1.7 million in 2001—a 13 percent increase.¹² One factor explaining the increase in trucks is that the volume from container ships continues to grow a rapid clip and is expected to increase by 186 percent over the next 20





years.¹³ This intermodal traffic is also predicted to double the amount of freight traffic hauled by train.¹⁴

These gateways and corridors mean a new regional hierarchy has emerged in the form of vast, newly recognized “super regions” that combine two or more metropolitan areas into a single huge urban system. *Megapolitan* areas refer to those metros that have “fused together” due to their outward expansion and reflect the fact that every day about 3.4 million people commute more than 50 miles or more to get to work.¹⁵ Examples include those places like the Washington/Baltimore or San Francisco/Sacramento areas that share commuting and housing sheds. *Megaregions* are the larger cousins of megapolitan areas and generally refer to large networks of two or more metropolitan areas that share large scale environmental, cultural, and functional characteristics.¹⁶

3. The third spatial effect is that the dynamic forces restructuring the American economy are revaluing the assets of the cities and urban cores within metropolitan areas.

The increased mobility—both domestically and internationally—of firms means that the success of cities increasingly rests on their role as centers of consumption.¹⁷ Likewise, increased incomes and education levels have increased the demand for these urban amenities, and together with reductions in nuisances like crime have fueled the resurgence of city populations.¹⁸

However, America’s metropolitan areas have also become exceedingly complex.

Suburbs are no longer just bedroom communities for workers commuting to traditional downtowns. Rather, they are now strong employment centers serving a variety of

functions in their regional economies. An investigation into the location of jobs in the nation’s largest metropolitan areas finds that over half are located more than 10 miles outside of downtowns. Only about one in six metropolitan jobs is located near the metropolitan core, within 3 miles of the downtown.¹⁹

Without a doubt some of this suburban growth is happening in city-like settings.²⁰ Yet a significant share of economic growth in metropolitan areas is also occurring in low density, non-compact forms. The American economy has largely become an “exit ramp economy,” with office, commercial, and retail facilities increasingly located along suburban freeways.²¹

Poverty, once overwhelmingly concentrated in cities, has likewise drifted into the suburbs. In 2005, for the first time in American history, more of America’s poor live in large metropolitan suburbs than live in big cities.²² Alarming, and in bleak contrast to their decline in big cities, the number of neighborhoods of high poverty in many older inner ring suburbs is actually increasing.²³

These spatial patterns are changing the nation in many important ways and have enormous implications for transportation. However, these effects are extraordinarily complex and broad agreement does not exist with respect to the nature of the relationship. For one thing, there is an obvious nexus between demographic trends (such as household formation) and economic growth and transportation, but causality is unclear. Nevertheless, the relationships are undeniable. In setting the stage for future discussions of federal transportation, decision-makers must keep in mind these important changes in shaping the physical landscape and economic destiny of this nation.