Traffic Congestion, Time, Money & Productivity

by Wendell Cox 09/18/2009

It is an old saying, but true as ever: "Time is money." A company that can produce quality products in less time than its competitors is likely to be more profitable and productive. An urban area where employees travel less time to get to work is likely to be more productive than one where travel times are longer, all things being equal. Productivity is a principal aim of economic policy. Productivity means greater economic growth, greater job creation and less poverty.

Congestion Costs: This is why such serious attention is paid to the Texas Transportation Institute's (TTI) Annual Mobility Report, which estimates the costs of traffic congestion, principally the value of lost time as well as excess fuel costs. The fundamental premise, long a principle of transportation planning and policy, holds that more time spent traveling costs money, to employers, employees and shippers.

Mobility & Productivity: Groundbreaking Research: Yet, until fairly recently, very little research was available to document the connection between travel times and the productivity of urban areas. The pioneering work has now been done by Remy Prud'homme and Chang-Woon Lee at the University of Paris. From reviewing French and Korean urban areas, they showed that productivity improves as the number of jobs that can be reached by employees in a particular period of time (such as 30 minutes) increases.

Focused US Research: US reports on mobility's role in reducing poverty came to similar conclusions. A middle 1990s report for the Federal Transit Administration found that low income households in inner city Boston were at a particular disadvantage in obtaining jobs in the fast growing suburbs because transit service was either spotty or non-existent. Margy Waller and Mark Allen Hughes noted in a report for the Progressive Policy Institute that "In most cases, the shortest distance between a poor person and a job is along a line driven in a car". Steven Raphael

and Michael Stoll at the University of California found that access to an automobile nearly halved the difference between African American unemployment and that of non-Hispanic Whites.

New, Comprehensive US Research: But it was only last month that the Prud'homme-Chang research was broadly replicated in the United States. The Reason Foundation published "Gridlock and Growth: The Effect of Traffic Congestion on Regional Economic Performance" by David Hartgen and M. Gregory Fields, which looked at job accessibility in 8 US urban areas (Atlanta, Charlotte, Dallas, Denver, Detroit, Salt Lake City, San Francisco and Seattle,). Hartgen and Fields chose a 25 minute commute period (the approximate national average one-way work trip) to evaluate accessibility and found, generally, that each 10 percent increase in the number of jobs accessible in that period resulted in a 1 percent increase in productivity, as measured by the Gross Domestic Product of the urban area. They also found that if free-flow traffic conditions could be established, considerable improvements in urban productivity would be achieved, because employees could get to more jobs in less time. At the same time, they show that traffic congestion will worsen considerably by 2030 under present plans as adopted by metropolitan planning organizations.

Hartgen and Lee looked at five sample work destinations in each urban area, the central business district, the airport, a university, a mall and a major suburb. The results by sub region were surprising:

"Contrary to conventional planning wisdom, the research suggests that regional economies might be more dependent on access to major suburbs, malls and universities than on access to downtowns or airports. Not only are models of productivity somewhat stronger for these sites than for CBD accessibility, but access to them has a stronger effect on regional productivity."

The research indicates that achieving free flow traffic conditions to major suburbs, universities and malls would increase gross domestic products by from 6 to 30 percent. The gain in central business districts would be between 4 and 10 percent, while airports showed the least potential for adding to urban productivity, at 2 to 8 percent. These productivity gains are far from unachievable. Hartgen and Fields find that there is more than enough transportation funding in each of the urban areas to remove severe traffic congestion by 2030. These conclusions find fault with the growing emphasis by many in Washington to force people out of cars and into transit. Transit is simply not viable for the non-downtown markets, which have the greatest potential for improving job creation and economic growth.

Hartgen and Fields also show that achieving free flow operations in the studied urban areas would generally produce more in increased tax revenues by 2030 than the costs associated with reducing it.

American Urban Areas: Superior Productivity and Mobility: American urban areas are among the most mobile in the world. When compared to international urban areas of similar size, work trip travel times in the United States tend to be less. That is one of the reasons that US metropolitan areas are the most productive in the world.

For example, the Japanese megacity of Osaka-Kobe-Kyoto has somewhat fewer people than the New York consolidated (metropolitan) area and slightly more than the Los Angeles-Riverside consolidated area. Osaka-Kobe-Kyoto has perhaps the world's second most heavily patronized transit system (after Tokyo), which carries at least 50% as many riders on its rail lines alone as *all* of the transit systems in the United States. Yet, in Osaka-Kobe-Kyoto, workers spend 20 percent more time traveling between work and home each year as New Yorkers. They spend 40 percent more time commuting than workers in Los Angeles, despite its having the worst traffic congestion in the nation. The difference between Osaka-Kobe-Kyoto and New York and Los Angeles lies in the fact that in the two American metropolitan areas, most workers travel to work by car, to destinations throughout the areas (Note 1).

Naïve Proponents of Poverty: However, not everyone understands that time is money. Some members of the US Senate and House of Representatives and Washington special interests would seek to restrict highway funding, making traffic congestion even worse. They would seek to reduce the number of miles that Americans travel by car in an attempt to achieve marginal greenhouse gas emission reductions (that is before the higher greenhouse gas emissions that occur in slower, more congested traffic is factored in). Secretary of Transportation Ray LaHood has indicated a desire to coerce people out of their cars.

Transit: Inherently Less Productive and Expensive: One common claim is that transit will provide alternative mobility. However, transit trips tend to be twice as long as car trips and no transit vision has ever been put forward that would replicate the efficiency of the automobile. There is good reason for this, since such a transit system would cost on the order of a metropolitan area's entire income, each year, to operate and amortize. And, transit is expensive. The recent compact cities policy lobbying paper, *Moving Cooler*, shows that transit is far from a cost effective means for reducing greenhouse gas emissions, costing 20 times the maximum $50 per ton guideline as established by the United Nations Intergovernmental Panel on Climate Change.

None of this is to deny the inestimable value of transit in serving the nation's largest downtown areas (such as Manhattan, Brooklyn, Boston, Philadelphia, Chicago and San Francisco). However these locations are commercial hyper-density aberrations in much larger low-density seas and are exceptional among America's more diffuse metropolitan areas. Rather, the problem is overselling transit in markets that it cannot competitively serve. Disinvesting in highways (forcing people into transit) makes no more sense than to require the injection of blood clots into the bloodstreams of patients under the guise of improving the health and livability of patients.

It's the Economy, Stupid: The United States has had enough recent experience with rising unemployment and falling economic performance. It hardly needs public policies that would increase travel time, reduce productivity and increase poverty, no matter how fervently and sincerely held are the misconceptions of the proponents. Hartgen and Fields have provided an invaluable work that could not have come at a better time.

Note 1: Calculated from United States Bureau of the Census American Community Survey and Japan Statistics Bureau data.

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