Do Highway Investments Boost Local Economies?

What Was the Need?
Transportation infrastructure is traditionally viewed as an attractive form of government investment, likely to stimulate economic growth by attracting firms and lowering business costs for local companies, particularly when supported by grants from higher levels of government.

In recent years, however, fewer resources have been available for transportation projects at the state and local levels. State departments of transportation and other public works organizations need to be more selective in identifying transportation projects where limited resources can produce the greatest returns. Research was needed to help MnDOT evaluate the potential of transportation investment to generate increases in private economic activity.

What Was Our Goal?
This project aimed to evaluate case studies of Minnesota highway improvement projects to provide empirical data about the potential effects of transportation investment on private economic activity at the local level.

What Did We Do?
Researchers began by evaluating literature on factors that affect development, including transportation, human capital and education, taxation and regulation, quality of life factors and nontransportation infrastructure.

Four case studies were then prepared about Minnesota transportation projects:

- The expansion of US 71/Trunk Highway 23 (TH 23) near Willmar, Minnesota.
- The expansion of TH 371 between Little Falls, Minnesota, and the Brainerd/Baxter, Minnesota, area.
- The expansion of US 53 north of Virginia, Minnesota.
- The construction of a new freeway interchange on Interstate 94 at Opportunity Drive near St. Cloud, Minnesota.

The effect of these projects was analyzed in two stages. First, researchers evaluated the effect of the US 71 and TH 371 projects on private earnings in transportation-intensive industries. This included county-level earnings by industry from 1991 to 2009, which covers time before and after the project’s completion. These data were fit into an earnings regression with controls for population, state-level earnings and national output. The US 53 project was not completed until 2009, so adequate data were not available for analysis, and the Opportunity Drive interchange was unlikely to generate impact outside of the project’s immediate area.

In the second phase of analysis, researchers evaluated all four case studies to determine whether they redistributed economic growth to areas directly affected by the investment. Researchers used city- and township-level employment data in this phase, comparing cities by their location relative to the improved highway segment.
**What Did We Learn?**

After accounting for population and macroeconomic trends, none of the industries studied in either case study location showed statistically significant earnings increases following completion of transportation improvements. No positive effect on employment was detected at the city level either. While the underlying variance in the data makes it impossible to rule out some positive impact, the potential effect would be quite small (a couple of percentage points).

The nation was in a deep recession at the end of the study period, which likely had a negative impact on earnings and employment during the post-construction periods, when growth effects from improved highways would be expected. Other studies, however, have indicated that the purely economic returns on transportation investment are declining, though still positive. Throughout the nation’s transportation network, the most profitable links have already been built, so new investments are unlikely to produce the same economic growth as they did half a century ago.

**What’s Next?**

These case studies support the suggestion that U.S. highway networks are largely mature, and new investment is subject to diminishing economic returns. The researchers do not interpret that result as an indication that the projects studied were not cost-effective or economically viable, or that there are not projects that can produce strong economic returns. However, they recommend a broader evaluation of user benefits, including travel time savings, safety and reductions in pollutant emissions. The Corridor Investment Management Strategy initiative is seeking to develop a system to evaluate the effect of transportation investments on these social impacts.

The Transportation Economic Development (TED) Program is also working to provide a more thorough accounting of the benefits of potential transportation investments. TED is a competitive grant program that bases awards on identifiable, quantifiable economic outcomes and on the likelihood that businesses directly benefiting from a project are willing to contribute to it. Additionally, a current Strategic Highway Research Program 2 (SHRP 2) project is developing the Transportation Project Impact Case Studies tool. This work would produce a database of case studies that could be used to determine a likely range of impacts for a proposal with similar characteristics.