

Linking Economic Development to Highway Improvements

There is a growing interest in the economic development potential of highway projects in economically disadvantaged regions of the United States. The relationship between economic development and highway investments is a complex one and, despite extensive research, there continues to be substantial disagreement over the best way to quantify economic impacts. Key analytical questions researchers grapple with include the following:

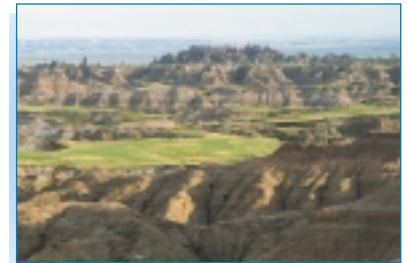
- Would economic growth have occurred if the road had not been built?
- Did the transportation investment create the development or was it the other way around?
- Did the investment merely redistribute economic activity from another region or did it actually generate new economic activity?

In addition to the problems posed by the nature of economic development analysis, traditional approaches to assessing the impacts of investments, such as conventional benefit-cost analysis, do not support this type of inquiry

since they tend to focus on “user impacts” rather than economic development impacts.

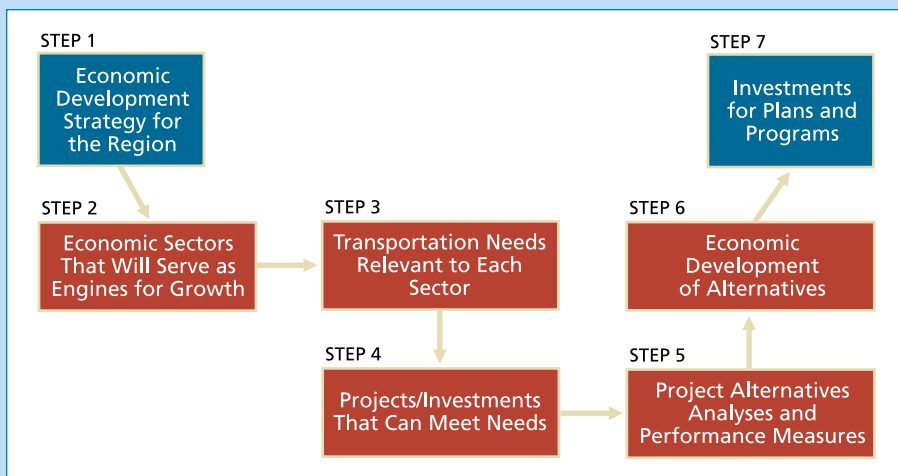
User impacts measure the savings to users of an improved facility and include travel time savings that are due to a reduction in congestion or construction of a more direct route; accident cost savings through improvement to a facility’s safety; and vehicle operating costs savings, such as a reduction in vehicle wear when a gravel road is paved.

Traditional approaches tend to weigh against investments in rural areas because the low traffic levels may not generate the magnitude of user benefits that can justify investments on a cost-benefit basis. However, improvements to rural highways can lead to economic development, even in cases where road capacity is not constrained. In many cases, highway investments are exactly what is needed to diversify regional economies, increase market reach, and foster growth in economic productivity.



A portion of Badlands National Park served as the location for this study.

Linkages Between Economic Development Strategy and Transportation Needs Assessment



ICF Consulting is working on an alternative approach to better demonstrate the need for highway investments in economically disadvantaged areas where traffic levels are relatively low. The approach is to link a region’s economic development strategy to infrastructure needs and allow this to guide the analytical process, rather than starting with a set of pre-defined transportation improvements and estimating the associated economic benefits. Once a region has identified the sectors that will serve as the primary focal point for development (for example, agriculture, manufacturing, tourism, etc.), transportation and other infra-

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structure needs can be assessed; specific alternatives can be compared; and the economic development impacts can be determined by demonstrating the reliance of specific development initiatives on highway improvements, and/or by investigating the incremental benefits accrued from investments in highways. In focusing on the local region's socio-economic context and planning efforts, the approach offers a more sustainable and targeted solution to long-term economic development of the area.

ICF Consulting used this approach to investigate the relationships between transportation investments and economic development in Pine Ridge Indian Reservation, which is situated in the southwestern region of South Dakota. Home to the Oglala Sioux Tribe, the reservation boasts a rich culture and history, as well as stunning natural scenery, including the South Unit of Badlands National Park. Despite the cultural and natural assets of the reservation, socio-economic indicators demonstrate a profound need for economic development. Pine Ridge suffers from elevated levels of unemployment and poverty and a lack of investment. The local transportation infrastructure does not support economic development in that it lacks internal connectivity and accessibility, suffering from inadequate construction and maintenance funding.

By focusing on the economic development opportunities offered by tourism, ICF Consulting identified the transportation investments that potentially would support the accrual of full economic benefits associated with a mature

tourism sector. We found that, assuming implementation of a suite of supportive initiatives, a mature tourism sector at Pine Ridge could attract more than one million visitors each year, translating into an estimated total economic impact of \$153 million over a 15-year period. By year 15, these tourists would generate more than one million auto trips per year, with a peak average daily traffic of 5,200 vehicles. The local transportation infrastructure enhancements that would be needed to provide adequate levels of service include both upgrading the functional class of key roads and performing adequate maintenance throughout the lifecycle of the improved roads. The costs of these transportation investments were estimated at \$73.3 million.

The work at Pine Ridge Reservation is part of the Economic Development Highway Corridors Study. Directed by Congress and overseen by the U.S. Department of Transportation Federal Highway Administration (FHWA), this study seeks to better understand the relationship between economic development and transportation investments in 12 rural corridors throughout the United States.

An expanded summary of the study can be viewed at www.fhwa.dot.gov/planning/econdev/pineridge.htm

For more information on ICF Consulting's capabilities in the transportation arena, please visit www.icfconsulting.com/transportation