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# RESEARCH UPDATES

## An Economic Evaluation of Highway Infrastructural Changes on Interregional Competition in the Potato Industry With Reference to Mississippi

by

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### **Problem**

The condition of the highway and bridge infrastructure is an important factor in determining the competitiveness of a region or state. For example, the rate at which a state or area improves the highway and bridge infrastructural system has an appreciable effect on the ability of the area to compete. In general, the areas that have the higher levels of improvements in highway and bridge infrastructures are in better positions to compete by lowering the cost per unit of shipment, reducing transit times, lowering inventory costs, lowering insurance rates, and by providing smoother and safer vehicular rides.

This study is part of the Regional Project S-244, "Transportation of Perishables," designed to address issues regarding a perishable transportation system which spans the continent and is linked to that system serving international trade.

The commodity selected for this analysis is potatoes.

The objective of this research area is to estimate how the changes in highway and bridge infrastructures affects the distribution of potatoes among regions in the United States and Mississippi.

### **Methodology**

To accomplish the objective of this study several steps will be involved. First, a reactive programming model will be developed. This base model will be used to estimate an optimum distribution of potatoes among regions in the United States and Mississippi. Second, the reactive programming model will be modified to estimate the effects of deteriorating highways and bridges on the optimum distribution of potatoes found in the base model. Third, the impact of selected

improvements on the highway and bridge systems by regions and Mississippi will be evaluated by comparing the results obtained from the base model.

### **Implications**

The condition of the highway and bridge facilities plays an important role in determining the profitability of farms, agribusinesses and non-agricultural businesses. Many farms, agribusiness, and others depend upon the highway and bridge infrastructure to transport inputs and products to markets. By improving highways and bridges, the firms might become effective and efficient in the production and distribution of potatoes and other agricultural commodities.

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