



River Transportation and the Broiler Industry in North Alabama: A Descriptive Analysis (Summary)

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This is a summary of “River Transportation and the Broiler Industry in North Alabama: A Descriptive Analysis” by Larry G. Bray at University of Tennessee - Knoxville and David P. Vogt at Decision Commerce Group, LLC. Funding for this paper came from the Agricultural Market Service (AMS) through cooperative agreement number 17-TMTSD-TN-0011. The full paper is available at:

https://ctr.utk.edu/CTR-research/USDA_17-TMTSD-TN-001_final_report-2.pdf

OVERVIEW AND CONTRIBUTIONS

This report examines the effects of a hypothetical total loss of waterborne shipping to Northern Alabama. A major way the economy would be affected, the report’s authors argue, is by the loss of the broiler industry in the region, which depends on the waterways to remain viable. Because barge is the lowest cost means of obtaining grain feed for the poultry industry, lock failures that prevented the barge use would result in costs high enough to drive poultry producers to leave the region. The loss of this industry’s contribution to the larger economy will precipitate large negative economic consequences. The authors estimate the impact to the economy based on 2016 economic activity related to the poultry industry.

METHODS AND DATA

The authors describe a scenario in which all broiler production has ceased in Northern Alabama due to increased feed costs caused by a cessation of barge traffic. Barge traffic provides a low-cost means of obtaining the grain necessary for feeding chickens, with an estimated savings of \$7-\$10 per ton near the Port of Decatur and \$2-\$4 savings near the Port of Guntersville. Barge traffic could cease due to a complete lock failure at the Wilson or Pickwick facilities (fig. 1), both of which were built in the first half of the twentieth century and were designed for a 50-year operational lifespan. First, the authors establish why the industry would collapse in the absence of waterborne commerce. They conclude that the increased costs and reduced shipping capacity for feed grains associated with a switch to other possible modes—truck and rail, including portage around failed locks— would be catastrophic to the industry. They then evaluate the economic impact of this industry.

Location of the Alabama Broiler Farms

About half of all Alabama poultry sales occur in the counties located either on the Tennessee River or one county removed from the river (fig. 2). Moving out from the river, field interviews suggest that the economic trucking distance from river terminals generally is not more than 100 to 125 miles. The two circles in figure 2 define the Alabama and Georgia counties that lie within 100 and 125 miles of the ports of Guntersville and Decatur, Alabama. Shipments generally move from the river terminals to the feed mills by truck and then on to the poultry farms, also by truck.

The data are reported as the number of poultry sales and percentages of the total poultry sales (by State) from the ports of Decatur and Guntersville, Alabama. One salient finding is that, whether measured from Decatur or Guntersville, approximately 690 million Alabama broilers were sold in 2012 within a 125-mile radius of each port city. As Conner (2017) noted, the development of the poultry industry in Northern Alabama required the import of Midwestern corn to supplement local feed grains. While some corn and soybeans are grown in northern Alabama, the amount produced is insufficient to meet the demands of the poultry industry in the area. The industry still needs Midwestern grain imports to sustain its current production levels.

Figure 1. River Infrastructure in Northern Alabama

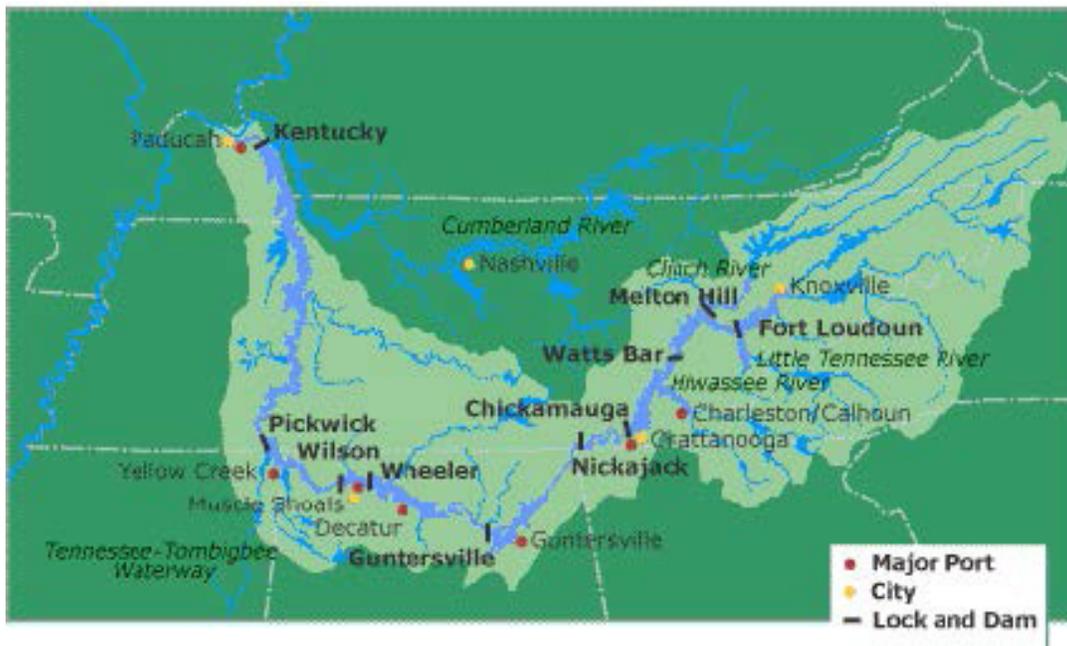
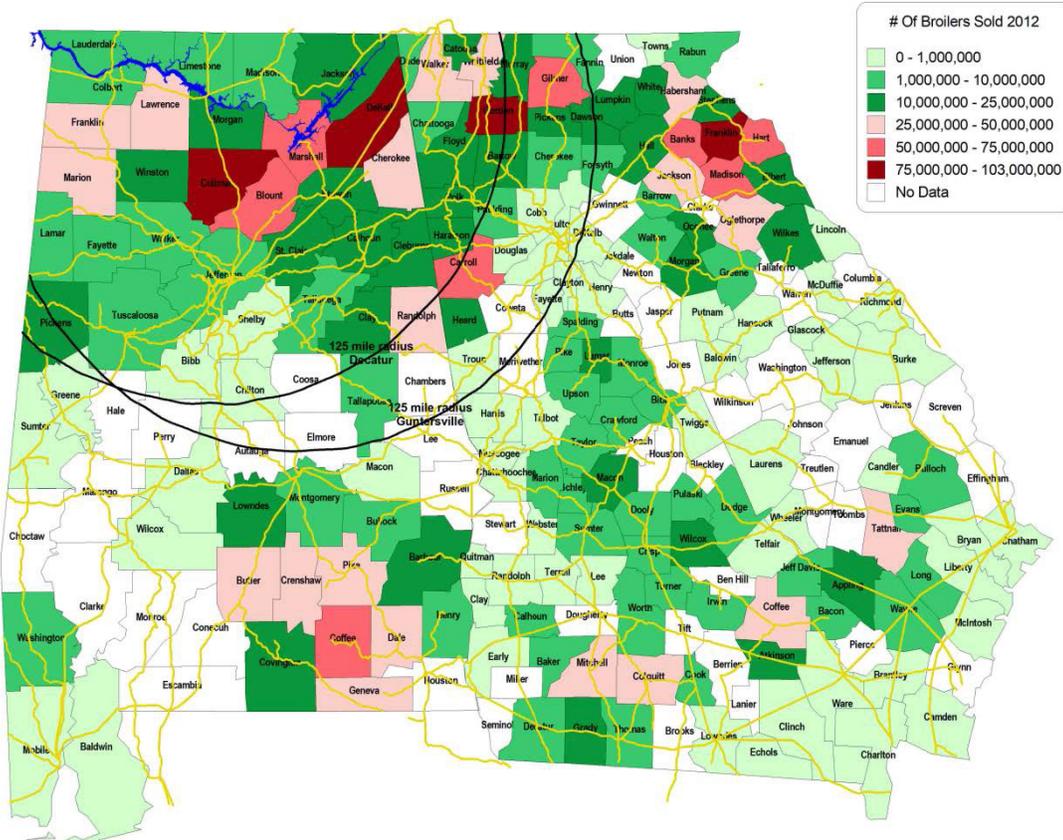


Figure 2. Alabama Counties with 125 of Guntersville and Decatur, AL



Economic Impact Analysis

To measure the consequences of the lack of barge traffic, the authors perform an economic impact analysis using a new method based in an input-output approach (of which IMPLAN is likely the best known). Their new analysis technique, the Decision Commerce Group Contribution Model, focuses on assessing the current contribution of economic activity from existing industry rather than the gain from new industry. The authors look at both the industry’s State-level contributions and its county-by-county numbers. They calculate purchases, gross-domestic-product contribution, wage contribution, and employment contribution.

FINDINGS AND CONCLUSIONS

A significant share of the poultry production and processing activities reside in Northern Alabama and depend on waterway shipments of grain. This study suggests a loss of the poultry industry would have serious effects on Northern Alabama. In 2016, the Northern Alabama poultry industry and its supply chain contributed about 6 percent to the overall State economy and about 9 percent of the total regional economic output. Based on estimates developed in this study, the region’s industry contributed about \$19.8 billion of the State's total poultry sales of \$239.9 billion—or about 8 percent to the State’s economy in 2016.

The authors found that, in 2016, the poultry industry in the region directly or indirectly contributed from roughly 3 percent to over 52 percent of private economic activity in counties within the region of interest. Of the 35 counties in the region, 14 depended on the industry for over 10 percent of their total economic activity, and 9 of these were highly dependent, with contributions above 20 percent. A loss of the waterway shipment of grains to these areas would likely have severe consequences for a diverse set of industries that supply the poultry industry. It would also severely affect the regional economy overall because of a reduced economic activity due to lower household income.

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PREFERRED CITATION:

Bray, Larry G and David P. Vogt. *River Transportation and the Broiler Industry in North Alabama: A Descriptive Analysis*. University of Tennessee, Knoxville. December 2019.
Web. <<http://dx.doi.org/10.9752/TS245.12-2019>>

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