



Economic Impact of a Repeal of the Jones Act for North Carolina Soybean Producers

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Introduction

Section 27 of the Merchant Marine Act of 1920 protects United States flag carriers and shipbuilders from foreign competition in the U.S. domestic maritime market. This legislation, referred to as the Jones Act after Senator Wesley L. Jones, requires that all cargo moving between United States ports be carried on U.S. owned and built vessels and operated by American crews. The law protects barge operators on the inland waterways, freighters on the Great Lakes, and deep-sea ocean carriers serving Hawaii, Alaska, Puerto Rico, and Guam.

Primary justifications for the Jones Act are that it ensures safety standards, environmental protection, and the adequacy of the domestic merchant marine fleet for national security during times of military crisis. Recently, there has been serious debate over whether or not the Jones Act should be repealed. Much of this debate has focused on national security. Those not favoring repeal argue that during times of conflict foreign ship owners may not be willing to risk their fleets to transport supplies and equipment to troops in combat overseas. Those who do favor repeal argue that no Jones Act vessels participated at all during the Gulf War, and that the Jones Act had to be partially suspended to ensure that adequate fuel supplies were maintained for the nation's defense (Quartel 1991). Repeal advocates contend that the security concerns that motivated the 80-year-old legislation appear to be outdated.

This issue of the *NC State Economist* explores the economic arguments surrounding the debate over the Jones Act. It summarizes the likely benefits and costs of repeal of the Jones Act, with special attention paid to what repeal would mean for North Carolina soybean producers.

Economic Arguments for Jones Act Repeal

In 1999 the U.S. International Trade Commission (USITC) reported "As of July 1, 1998, the active Jones Act fleet consisted of 113 ocean-going vessels over 1,000 tons...." The same report stated "In 1996 all domestic waterborne commerce covered by the Jones Act, including oceanborne (coastwise/intraterritory), lakewise, and inland shipping, amounted to approximately 1,101 million short tons of traffic and revenues of \$7.7 billion." The same report estimated that eliminating the Jones Act would result in a 22 percent reduction in the price of shipping and result in approximately a \$1.32 billion welfare gain to the U.S. economy. This decline in rates for waterborne transportation also would likely put pressure on internal rail freight prices, as these modes of transportation compete in domestic commerce.

Because of their vested interest in the issue, agricultural groups have been actively involved in the debate over Jones Act repeal. At a 1996 hearing of the Subcommittee on Coast Guard and Maritime Transportation (of the House Committee on Transportation and Infrastructure), several agricultural representatives argued for repeal of the Jones Act. The president of the American Farm Bureau, noting the importance of water transportation to U.S. agriculture in transporting products, pointed out that the current law undermines the ability of U.S. farmers to compete with foreign producers who can move their products in U.S. markets on competitive foreign vessels.

One key issue for U.S. grain farmers has been that there are no Jones Act vessels that are shipping grain from the Mid-West to the Southeast, thus preventing Southeastern livestock producers

access to waterborne U.S.-grown grain (logistical arguments of the feasibility of this route notwithstanding). This has meant that on occasion the Southeastern poultry and pork industries have resorted to importing foreign grain on foreign-flagged and owned ships; this has been perceived as lost sales for U.S. farmers.

At those same maritime hearings, a coalition of eastern North Carolina farmers engaged in production of livestock and poultry testified that historically they have relied on rail transportation originating in the eastern grain belt to supplement local supplies. While acknowledging that rail will probably remain the primary mode of grain movement from other states (for logistical reasons), they cautioned against over-reliance on one source of transportation for feeding live animals. They argued that movement of grain by water would be a viable transportation alternative, but noted that the only currently competitive cargo under the current legislation is foreign cargoes delivered into the port of Wilmington.

What Is at Stake for North Carolina Soybean Producers?

North Carolina is a net importer of soybeans from other states, due largely to the heavy grain demand of the state's hog and poultry industries. For 1999, total demand for soybeans in North Carolina was estimated at 67.5 million bushels. In the same year, soybean production in North Carolina amounted to 29.9 million bushels, thus requiring the import of 37.6 million bushels (about 58 percent of total demand).

Because North Carolina imports large quantities of soybeans to satisfy local demands, the price of soybeans in North Carolina tends to be higher than in other states. This is because the cost of transporting soybeans from outside the state is a part of the price that North Carolinians must pay for soybeans. For this reason, North Carolina soybean producers receive a premium on locally produced soybeans. If repealing the Jones Act has the effect of reducing the domestic waterborne rates, and consequently the internal (rail) freight rates, then this will decrease the premium to North Carolina soybean producers – and hence the price they

receive. This lower price in turn will tend to cause North Carolina's soybean producers to supply fewer soybeans, causing soybean imports into the state to be a larger fraction of total soybeans consumed in North Carolina.

Welfare Effects of Jones Act Repeal

Determining the welfare effects of repeal of the Jones Act requires knowledge of changes in market prices and quantities demanded and supplied for different regions. These hinge critically on the responsiveness of demand and supply to changes in price – the respective elasticities of demand and supply. In addition, the magnitude of the price and quantity changes will also depend on the cost of transporting soybeans.

A study currently being conducted by Piggott and Goodwin (2001) quantifies what these key parameters are so that the welfare effects from a reduction in transaction costs can be estimated for soybean producers in different regions. The study uses historical data and quantitative methods to generate estimates of the elasticities of demand and supply for both North Carolina and the rest of the U.S., as well as the magnitude of transaction costs involved in importing soybeans into North Carolina.

Utilizing a similar but slightly more sophisticated technique used by Goodwin and Piggott (2001), transaction costs involved in trading soybeans between North Carolina and the rest of the U.S. were estimated to be 3.64 percent. That is, soybean prices would have to be at least 3.64 percent higher in North Carolina than the rest of the U.S. to trigger flows of soybeans into the state.

Table 1 shows the price, quantity, and welfare effects from a simulated 22 percent reduction in transaction costs involved in transporting soybeans into North Carolina from the rest of the U.S. A 22 percent reduction was simulated following the estimated impact on shipping rates from the USITC 1999 study. The implicit assumption being made in this context is that we might expect a similar decline in other modes (such as rail) as a result of additional competition. The reduction in transaction costs results in a \$0.04 per bushel reduction in the price of soybeans in North Carolina, or 0.74 percent based on the average price of \$6.676 per bushel. This lower price

induces a reduction in the quantity supplied of 0.73 percent or about 0.257 million bushels. This amounts to an annual loss in overall welfare or producer surplus for N.C. soybean producers of \$1.743 million dollars.

On the other hand, exports from the rest of the U.S. into North Carolina increase by an estimated 0.309 million bushels. The simulated price increase in the rest of the U.S. is very small, equaling 0.03 percent (less than \$0.01 per bushel) because trade with N.C. accounts for only a small percent of total soybean demand. However, the very small non-North Carolina price increase nonetheless has an impact on both supply and demand for the rest of the U.S. Simulations indicate that supply would increase by 0.0046 percent annually, while demand would decline by -0.0064 percent in response to this slightly higher price. While these percentages are small, the overall impact on producer surplus is significant — \$5.790 million — due to the large quantities supplied. Importantly, the positive impacts of Jones Act repeal to soybean producers in the rest of the U.S. outweigh the losses that repeal would cause to North Carolina soybean producers.

Conclusion

Agricultural producers have been involved in the recent debate of whether there needs to be reform of the Jones Act. This article has focused on the impact of Jones Act repeal on soybean producers in North Carolina and the rest of the U.S. Not surprisingly, each group's stance on Jones Act repeal reflects its own self-interest: producers outside of North Carolina would benefit from repeal, while North Carolina producers would lose.

The estimated price and quantity and subsequent welfare effects shown in Table 1 shed light on the magnitude of these respective gains and losses. The welfare loss to North Carolina producers of \$1.743 million represents about 5 cents per bushel, or a little less than 1 percent of the \$208 million in average annual cash receipts of the state's soybean growers over the period 1996-99. At the same time, the estimated net gain to soybean producers elsewhere in the U.S. of \$5.8 million exceeds the losses to North Carolina producers. One implication of this is that producers in the rest of the U.S. could compensate North Carolina producers for the losses they would suffer from repeal of the Jones Act and still achieve significant positive net benefits — a potentially important bargaining point in resolving the political debate over this issue.

Table 1: Simulated Effects of a 22% Reduction in the Transaction Costs of North Carolina from the Rest of the United States

| | Units | Before repeal | |
|--|-----------|------------------|---|
| North Carolina | | | |
| Supply | mill. bu. | 35.370 | |
| Demand | mill. bu. | 71.048 | |
| Price | (\$/bu) | 6.676 | |
| Rest of the U.S. | | | |
| Supply | mill. bu. | 2,841.000 | 2 |
| Demand | mill. bu. | 2,805.323 | 2 |
| Price | (\$/bu) | 6.442 | |
| Change in Producer Surplus (\$ million) | | | |
| North Carolina | | -1.743 | |
| Rest of the U.S. | | 5.790 | |

Source: Piggott and Goodwin (2001)

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