Freight Railroads and International Trade

Association of American Railroads **March 2017**

Summary

International trade plays a massive and growing role in the U.S. economy. For the U.S. economy as a whole, exports and imports combined are equivalent to around 27 percent of GDP, up from around 17 percent 30 years ago. For U.S. freight railroads, international trade plays an even greater role: **at least 42 percent of the carloads and intermodal units railroads carry, and more than 35 percent of rail revenue, are directly associated with international trade**. (If freight indirectly associated with trade were included, the figures for railroads would be even higher.) To be sure, globalization has harmed some U.S. workers, and policymakers should work to ameliorate that harm. But turning our backs on international trade would do far more harm than good. It would significantly worsen our nation's economy, our standard of living, and our quality of life, with the lowest income Americans particularly hard hit. Policymakers should not deprive Americans of the tremendous advantages brought about by engaging fully in the global economy.

Why Do We Trade?

Virtually no one in the world today is self-sufficient: we all obtain goods and services of value from someone else in exchange for something of value we offer in return. Put another way, we all trade. Our trading partners might be across the street or on the other side of the world, but the principle is the same: we trade because we produce some goods or services at costs lower than the costs our trading partners would incur to produce those same goods or services. In economic jargon, we have a "comparative advantage" in supplying what we sell to others, and a "comparative disadvantage" in what we buy from others. Trade means we play to our strengths, leading to more goods and services to go around. Trade makes the world richer.

There are other important points to remember about trade:

- Trade is not a zero-sum game in which one side "wins" and the other "loses." Instead, it's a two-way street aimed at using specialization to make efficient use of resources to increase material welfare. **In aggregate, both sides benefit**.
- Because trade is almost always voluntary, people and firms gain from it, or else they wouldn't do it. The flip side is that increased barriers to trade **prevent people from making exchanges they want to make and make people pay more for what they want**.
- Trade may lead to fewer jobs at some firms that compete with imports, but it also leads to more jobs at firms that export and at firms that use imports to manufacture products for the domestic market.

- Trade and innovation are both about finding ways to be more productive. Ultimately, productivity growth is the best way to create widespread prosperity because it means more resources become available to expand opportunities elsewhere in the economy. **Put another way, limits on trade might save certain jobs, but it also keeps other jobs — and the huge productivity and quality of life advancements they could entail — from coming into being**.
- In the face of trade restrictions, U.S. exporters are sure to face retaliatory measures. As the saying goes, an eye for an eye makes the whole world blind.
- Low-income households benefit disproportionately from having access to cheaper imports because they spend a greater share of their budgets on import-heavy goods like clothing, footwear, household items, and furniture. That's why low-income households generally have the most to lose from greater restrictions on trade. Trade wars produce no winners, but the **biggest losers in a trade war would the poorest Americans**.
- When Americans buy goods and services from abroad, the dollars they send abroad usually come back in one way or another. Foreigners might use the dollars to pay for U.S. exports, or for U.S. capital assets such as stocks, bonds, and beneficial direct investments in plants, equipment, and real estate.

Railroads and International Trade

By linking businesses to each other here and abroad, freight railroads have played a crucial role in America's economic development for more than 185 years. Without railroads, American firms and consumers would be unable to participate in the global economy anywhere near as fully as they do today. And without trade, America's freight railroads would be a fraction of what they are today.

- Based on an AAR analysis of data from the STB Waybill Sample and other government and industry sources, in 2014 **international trade accounted for an estimated 35 percent of U.S. rail revenue** ($26.4 billion out of $75.1 billion in total revenue); **27 percent of U.S. rail tonnage** (511 million tons out of a total of 1.88 billion tons); and **42 percent of the carloads and intermodal units U.S. railroads carried** (13.4 million units out of 32.2 million total units carried.[1]

International Trade as a Share of Rail Traffic in 2014

	Rail Total	Trade Share	Trade % of Total
Revenue ($ bil)	$75.1	$26.4	35.2%
Tons (millions)	1,879.4	511.0	27.2%
Units (millions)*	32.2	13.4	41.6%

*carloads and intermodal containers and trailers
Source: AAR analysis of government and other data

- The 511 million in rail tons associated with international trade in 2014 included 329 million tons of exports; 171 million tons of imports; and 11 million tons that pass through the United States but begin and end their journey elsewhere (e.g., Canada to Mexico, Mexico to Canada, or Canadian or Mexican goods imported or exported through U.S. ports).

[1] The STB Waybill Sample contains shipment data from a stratified sample of waybills submitted each year by freight railroads to the Surface Transportation Board. Each waybill in the sample contains, among other things, information on the origin and destination of the shipment and the volume and type of product moved.

- Of the $26.4 billion in U.S. freight rail revenue associated with international trade in 2014, $9.6 billion was from intermodal containers and trailers, and $16.8 billion was from carload traffic — that is, freight carried by boxcars, hopper cars, tanks cars, or other types of rail cars. Rail revenue associated with exports ($13.3 billion) exceeded rail revenue associated with imports ($12.4 billion).

U.S. Rail Revenue From International Trade ($ billions)

	Carload	Intermodal	Total
Imports	$7.2	$5.2	$12.4
Exports	$9.1	$4.2	$13.3
Pass through	$0.5	$0.2	$0.7
Total	$16.8	$9.6	$26.4

Source: AAR analysis of government and other data

- **Rail movements associated with international trade include virtually every type of commodity railroads carry and involve every region of the country** — coal for export out of ports in Maryland, Virginia, the Gulf Coast, and the Great Lakes; paper and forest products imported from Canada to the Midwest; imports and exports of Canadian and Mexican automotive products to and from auto factories in dozens of U.S. states, reflecting the deep integration of the North American auto industry; containers of consumer goods from Asia coming ashore in Los Angeles, Long Beach, Oakland, Seattle, Savannah, Norfolk, New York, and many other ports; plastics shipped by rail from Texas and Louisiana to the East and West Coasts for export to Europe and Asia; iron ore mined in Michigan and shipped by rail to Great Lakes ports; grain grown in the Midwest and carried by rail to the Pacific Northwest and the Gulf Coast for export to Asia. The list goes on and on.
- Because of data limitations, some rail traffic associated with international trade — such as near-port transloading of imports to domestic containers; rail shipments of domestic goods that are used as inputs to products that are ultimately exported; rail shipments of domestic goods that have imported components; and shipments that are actually imports or exports but are not identifiable as such in the Waybill Sample — are not included in the tables above. If they were, the share of rail traffic associated with international trade would be considerably higher.

International Trade and Jobs

Trade has always been a sensitive political issue in American politics because of its real and perceived impact on jobs. To be sure, imports that displace domestic production can and do lead to job losses, but job losses due to trade are often exaggerated.

One representative study[2], by the Center for Business and Economic Research at Ball State University in June 2015, looked at the 5.6 million U.S. manufacturing jobs lost between 2000 and 2010, the largest decline in manufacturing employment in U.S. history. The study found that just 13 percent, or around 750,000 of the 5.6 million job loss over 10 years, was due to direct imports and import substitution. By contrast, the study found that **productivity growth due to automation and other technologies accounted for more than 85 percent of the manufacturing job losses, dwarfing the trade impact**.

750,000 in job losses in aggregate over 10 years — some 6,250 per month, on average — is not insignificant, but it should be kept in context. On average, during each month from 2000

[2] Michael J. Hicks and Srikant Devaraj, *The Myth and Reality of Manufacturing in America*, June 2015. Available at http://projects.cberdata.org/reports/MfgReality.pdf.

to 2010, an average of 4.8 million new hires were made in the United States, and 4.8 million workers lost or quit their jobs. Most people who leave their job do so voluntarily, but each month from 2000 to 2010, an average of 1.9 million Americans were involuntarily discharged from their jobs. In that context, an average of 6,250 jobs lost due to imports per month is a small percentage. Job churn is a fact of economic life everywhere.

That said, policymakers should consider assisting those who have not shared in the gains from trade (and automation, for that matter). Assistance might take the form of improved training and educational options that enhance domestic opportunity and social mobility. Even better, policymakers can implement pro-growth economic policies that lead to a robust economy where those who are displaced from a job for any reason are more likely to be able to find another one. Increased protectionism, on the other hand, is not the way to go because it would entail costs that greatly exceed the benefits.

Robust international trade means more jobs for railroaders as well. The rail trade data discussed above implies that **approximately 50,000 rail jobs, worth over $5.5 billion in annual wages and benefits, depend directly on international trade**. This does not include other significant job-related impacts including employees at ports who handle shipments moving by rail, jobs at firms that supply goods and services to railroads and others in support of trade-related rail movements, and secondary and tertiary job impacts derived from the expenditures of railroad employees, port employees, and their suppliers. These job-related impacts help explain why focusing solely on workers at firms that compete with imports is shortsighted.

NAFTA in Particular Has Been an Economic and Foreign Policy Success

Since the North American Free Trade Agreement (NAFTA) entered into force in 1994, bilateral trade between the United States and Mexico has surged and today exceeds $500 billion per year. NAFTA has furthered the long-term U.S. political, diplomatic, and economic interest in a flourishing, democratic Mexico. This reduces immigration pressures and increases Mexican demand for U.S. goods and services.

Moreover, around 40 percent of the value of U.S. imports from Mexico consists of content originally made in the United States — for example, auto parts made in the United States but assembled in Mexico. This kind of trade in component parts makes standard measures of bilateral trade balances misleading.

Ripping up NAFTA would do immense damage. It would show the U.S. to be an unreliable partner in its foreign relations. It would also disrupt production chains across North America, grievously harming both Mexico and the United States. It would add to border tensions while shifting trade to Asia without bringing back meaningful numbers of U.S. manufacturing jobs.