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ECONOMIC Synopses

Value-Added Trade vs. Gross Trade

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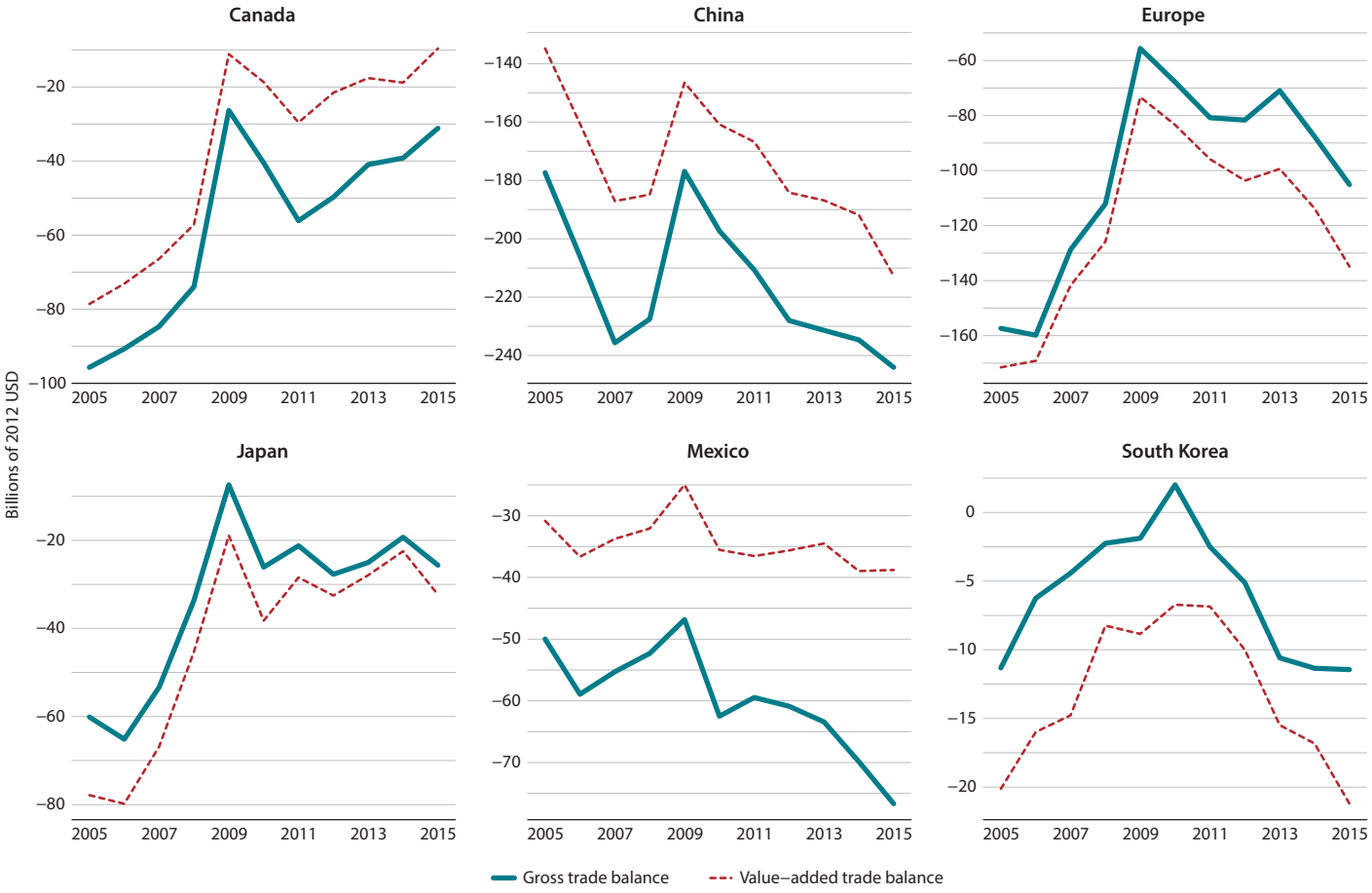
The rise of globalization has led to increasingly complicated supply chains. Raw materials and intermediate goods now move strategically throughout the world before a final good reaches the consumer. Traditional measures of trade often do a poor job of capturing this complexity.

For example, when Mexico assembles a vehicle, only one-third of the vehicle's value is derived from Mexican parts and labor. The rest is due to foreign components; about 74 percent of these foreign parts is imported from the U.S.[1] However, when Mexico ships this vehicle to the U.S., the entire factory cost of the vehicle, which includes the cost of *all of the parts* and assembly, will be added to the U.S. trade deficit with Mexico despite the fact that much of the vehicle's value comes from U.S. parts. In other words, the U.S. would run a much larger trade deficit in terms of gross trade with Mexico than in terms of value-added trade.

Traditional trade measures record gross, or total, flows of goods and services every time they cross a border. This includes the cost of inputs plus the value added by each country. Such traditional trade measures lead to double

U.S. Trade Balance with Major Partners (2005-15)



NOTE: Europe includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.
SOURCE: OECD-WTO: Statistics on Trade in Value Added and authors' calculations.

counting because countries trade intermediate goods for further processing.

Additionally, as we saw in the vehicle example above, such measures neglect the role of other countries in the supply chain. One way to combat this issue is to look at the value added, such as labor compensation and profits, by each country at each step of the production process. This provides a better way of incorporating the intricacies of today's global supply chain into trade accounting.

Measuring value-added trade provides a more accurate picture of global trade.

The Organisation for Economic Co-operation and Development provides value-added trade statistics from 2005-15.[2] The figure shows the U.S. trade balance from 2005-15 with several major trading partners in terms of real gross trade and real value-added trade.

We see from the figure that the U.S. bilateral trade balance can vary significantly depending on whether one looks at value-added trade or gross trade.

For example, the U.S. trade deficit with Canada and Mexico shrinks considerably and is on average 40 percent smaller when looking at the value-added trade balance as opposed to the gross trade balance. Futhermore, the U.S. trade deficit with Mexico was cut in half in 2015. These changes likely reflect the fact that many exports to the U.S. rely on content from other countries including the U.S., as we saw in the vehicle example.

Also, the U.S. trade deficit with China is on average 20 percent smaller when looking at the value-added trade balance as opposed to the gross trade balance, but it is 40 percent larger with Japan and twice as large with South Korea. Again, these changes likely reflect the fact that many Chinese exports to the U.S. rely on higher value-added foreign content (e.g., from Japan and South Korea).

Conventional trade statistics may have been sufficient when goods were produced entirely within a nation's borders and then exported to other countries; but with increasingly complicated supply chains and an increasingly interconnected global economy, value-added trade can provide a more accurate picture of global trade. ■

Notes

[1] de Gortari, Alonso. "Disentangling Global Value Chains." Working Paper, November 2019.

[2] "Measuring Trade in Value Added," in *Interconnected Economies: Benefiting from Global Value Chains*. OECD Publishing, Paris, 2013.

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