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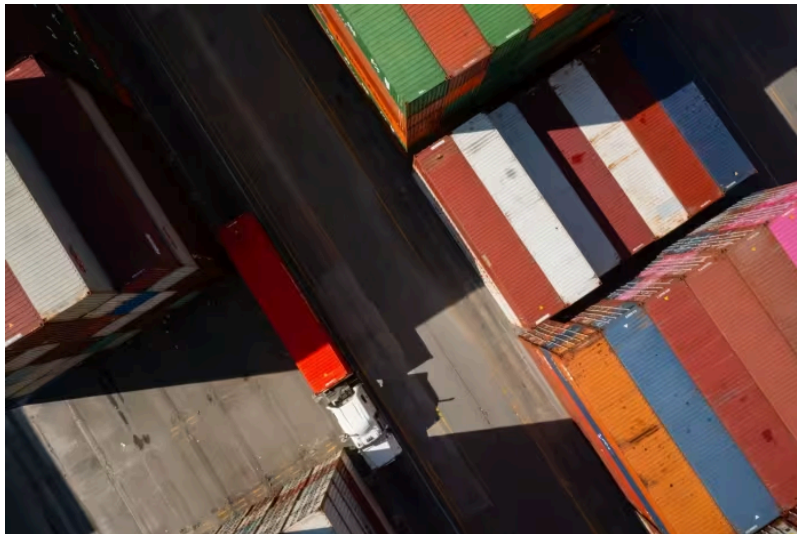
Is Globalization in Decline? A New Number Contradicts the Consensus

Instead of looking at the dollar value of trade, focus on how many tons of stuff get shipped how far



By [Josh Zumbrun](#) [Follow](#)

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Shipping containers awaited transport at Georgia's Port of Savannah earlier this year. PHOTO: ELIJAH NOUVELAGE/BLOOMBERG NEWS

This is a column about two numbers that seem to tell contradictory stories about globalization.

Over the past 15 years, a consensus has developed that globalization has run its course and gone into decline. One popular number supporting this argument: Trade as a share of global output peaked in 2008 at the cusp of the global financial crisis and has never recovered.

But a new metric from a pair of young economists, Sharat Ganapati of Georgetown University and Woan Foong Wong at the University of Oregon, tells the opposite story: More goods are traveling greater distances than ever before.

That seems impossible if globalization has truly swung into reverse. So which is right?

The standard numbers

The importance of trade is usually measured via the dollar value of all exports and imports divided by global gross domestic product. That ratio climbed from 38% in 1990 to 61% by 2008, according to the World Bank.

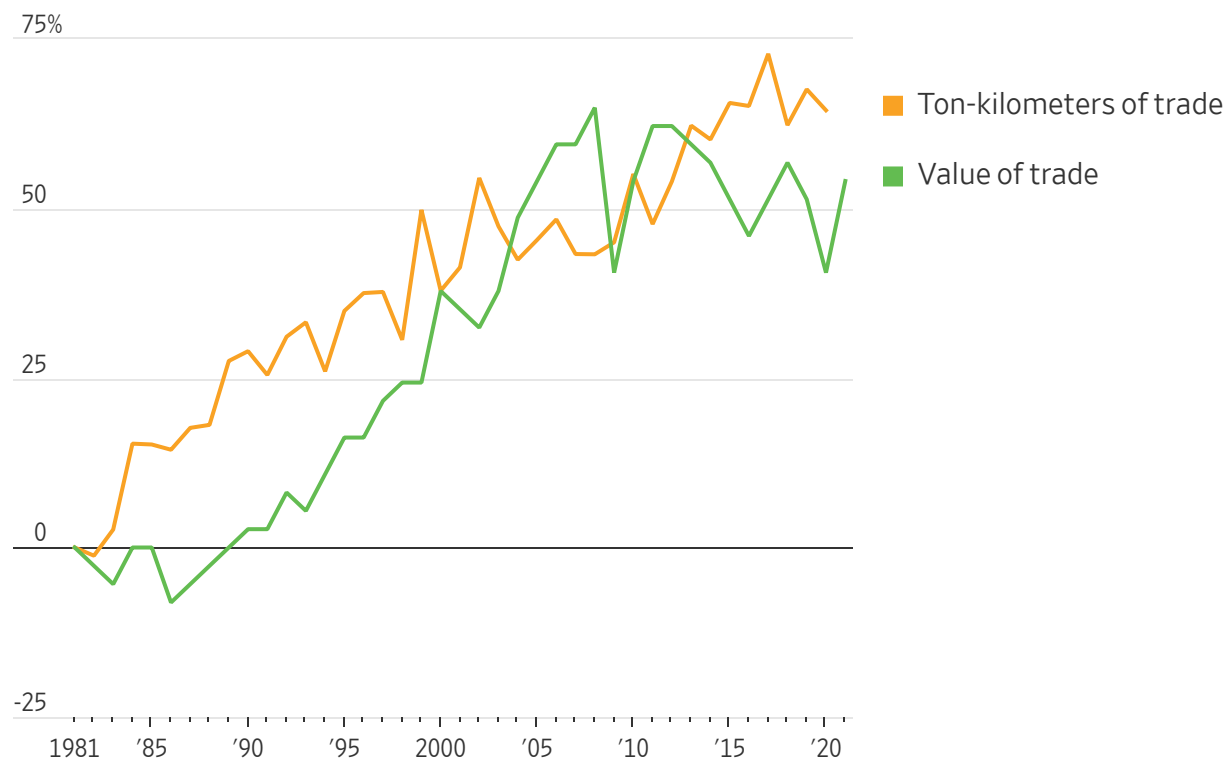
This was a golden age of internationalism. The fall of communism and the 1991 collapse of the Soviet Union opened new frontiers for trade. The World Trade Organization was launched in 1995. In 2001, China joined the WTO, bringing the world's most populous country fully into the era of globalization.

When the 2007-09 global financial crisis hit, economies around the world entered recession and questions grew about whether globalization should have been pursued in the first place.

Two Numbers, Two Stories

Growth in ton-kilometers of trade has continued even as trade values stagnated since 2008.

Change since 1981 in trade value and ton-kilometers of trade, adjusted for GDP



Sources: World Bank (value); Sharat Ganapati and Woan Foong Wong (ton-kilometers)

A new index

While economists measure trade using its dollar value, people who work in transportation prefer the ton-kilometer: total distance traveled by freight, multiplied by its total weight. It treats moving 5 tons 20 kilometers as the same as moving 2 tons 50 kilometers or 1 ton 1 kilometer 100 times. The U.S. Bureau of Transportation Statistics uses the ton-kilometer to compare air, train and truck freight.

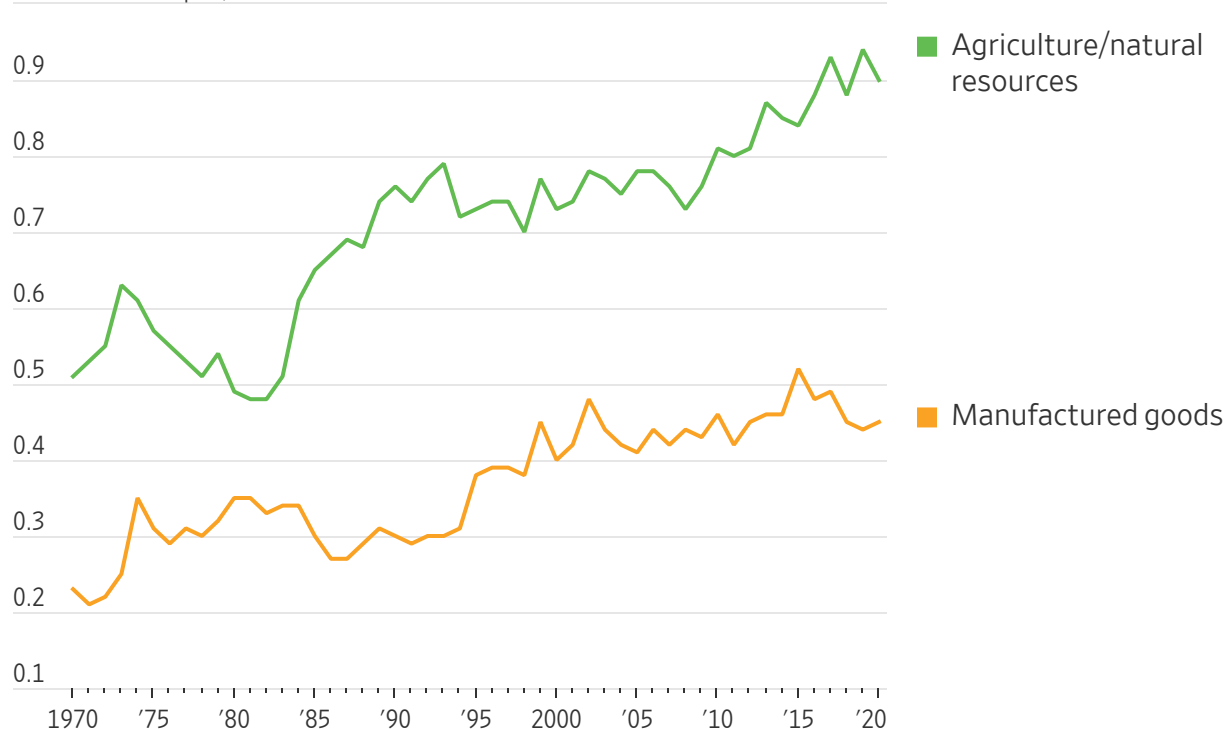
A shipping executive told Ganapati that this statistic captures “how much are we moving and how far are we moving it. It encapsulates both pieces of information.”

In a paper published this summer Ganapati and Wong calculated this metric for the global trading system. They found that while the trade share of GDP peaked in 2008, ton-kilometers of trade surged 49% from 55 trillion in 2008 to 82 trillion in 2019, outpacing global-inflation adjusted GDP growth by 18% during this period. The figures declined somewhat in 2020 during the pandemic. Ganapati intends to, but hasn't yet calculated, their figures for 2021 and beyond, citing that the necessary information is available only with a lag.

Shipping has increased for raw materials such as agricultural goods and natural resources, but has stagnated for manufactured goods

Ton-kilometers shipped, divided by world GDP

1.0 ton-kilometer per \$1



Source: Sharat Ganapati and Woan Foong Wong

Resolving the paradox

How can the value of trade be down, if the tonnage and distance are up? The obvious way this could happen is if the items being shipped are getting cheaper per ton. This could happen if their price per ton is falling, or if the mix of trade is shifting to goods that cost less per ton, such as raw materials, or some combination.

And both appear to be happening.

Consider lithium, which is growing in importance as a crucial material in batteries for cars and electronic devices. A ton of lithium carbonate costs \$22,000 whereas a ton of iPhones—around 2,000 units—would be worth millions of dollars. Companies can move factories closer to customers, reducing ton-kilometers, but can't move the lithium mines.

If you visualize global trade, you might think of 40-foot containers stacked atop containerships like Legos. But only 13% of the vessels in the global shipping fleet are those containerships laden with finished consumer goods, which have the highest price per ton. Over 75% of the global fleet, by tonnage, are ships that only carry bulk goods, such as agricultural products, natural resources or refined petroleum.

Rethinking globalization

Other economists have also pointed out that globalization hasn't retreated as much as the familiar trade-to-GDP ratio implies. In a series of essays, Richard Baldwin, professor of international economics at the IMD Business School in Lausanne, Switzerland, has argued that "peak globalization" is overstated.

He notes that the peak in trade value in 2008 was driven heavily by raw materials being extremely expensive that year. When prices fell during the global financial crisis, it made the value of trade plunge. But the volume of raw materials being traded continued to rise.

International trade in services, such as cross-border financial services, telecommunications or intellectual property, though harder to measure, has also continued to rise.

This is leading to a growing sense that globalization might not be as dead as we thought.

"I wouldn't say it was unreasonable to worry about the fate of globalization and whether it would unravel," said Douglas Irwin, a trade historian at Dartmouth College. "I don't think we're out of the woods yet. But it's proved a lot more resilient than the doomsayers were predicting five years ago."

Even if the value of trade has fallen, we should still care about the growing volume of trade at ever-greater distances because it shows that the world remains dependent on global trade, said Ganapati. The distances, he said, also illustrate the risks of supply-chain disruptions.

“For a while we were worried about where our iPhones are coming from. What really matters today is these raw materials that are not the iPhone itself but all the lithium, titanium, steel and oil that needs to be shipped around the world,” he said.

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Corrections & Amplifications

A graphic in an earlier version of this article incorrectly included data for ton-kilometers of trade which wasn't adjusted for global GDP. The same graphic also incorrectly showed the changes in fractions of a percentage point instead of whole percentage points. (Corrected on Nov. 3)

Appeared in the November 4, 2023, print edition as 'Is Globalization Over? A New Metric Says No'.

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