In Global Trade, Familiarity Breeds Commerce



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Given time and experience, even countries far apart in geography and culture can build strong trade links.

For decades now, the world has been shrinking under the might of technology and engineering. Airplanes fly people to ever more places at prices unthinkable just 20 years ago. Developments in logistics, supply chains and e-commerce deliver a mind-boggling array of goods to consumers' doorstep. And over the past year, millions have found that thanks to video conferencing tools, it has never been easier to meet and talk with someone on the other side of the world. But there is one critical human activity for which distance still matters more than one might expect: trade.

Since the 1960s, economists have noted a remarkable pattern in bilateral trade – that trade between two countries is proportional to the size of their economies and inversely proportional to the distance between them. Economists call it the **gravity theory of trade**, analogously named after Newton's law.

While economists can easily explain how economic size shapes international trade flows, they struggle to account for the persistent and even rising impact of distance and borders, despite massive improvements in transportation links and logistics and a proliferation of free trade agreements that has reduced tariff barriers.

To complicate matters, the exchange of goods between countries does not just decrease with distance; it takes a hit from **borders**. For example, trade between Ontario and British Columbia, which are more than 2,000km apart, will be far greater than trade between Ontario and its American neighbour, New York state.

We should take physical borders and geographic distance seriously but not literally. They are proxies for a host of unmeasured and even unknowable trade costs. Drawing an analogy with physics again, they have been dubbed "dark trade costs". That is, borders and distance capture unmeasured factors such as historical legacies, cultural differences, informational constraints, and the lack of business and social networks.

The bigger question is not the significance and form of dark trade costs but how countries can surmount them. In a newly published **paper**, my colleagues and I show that as a pair of countries gain experience via bilateral trade, they learn more about dark trade costs and overcome them over time.

The 'dark' costs of trade

For our study, <u>Ana Maria Santacreu</u>, <u>Daniel Traça</u> and I examined more than 1 million observations of trade for some 30,000 country-pairs taken from the <u>International Monetary Fund</u>. Our sample covered the period between 1948 and 2006 and accounted for 99 percent of world trade. We also factored in various forms of preferential trade arrangements using data from the World Trade Organization.

We measured trade experience in two ways: the number of years of strictly positive exports and the cumulated value of past exports. In our sample, 5 percent of country-pairs had zero experience trading with each other over the entire time period, while 5.6 percent of country-pairs traded for exactly one year.

Of those that traded more than one year, 23 percent exhibited continuous trade, with the remaining 77 percent registering at least one break in trading

experience. Such rich variation in experience across country-pairs over time allowed us to evaluate the importance of experience.

We took as given that there are some unobserved or dark trade costs. When a country starts exporting to a new destination, a significant component of trade costs is related to the novelty and uncertainty of selling in an unfamiliar environment, learning customer preferences, liaising with shipping agents and customs officials, and navigating laws and regulations. With time and experience, exporters become more informed and build relationships, reducing trade costs and expanding bilateral trade.

Using equations derived from the gravity model, we found that for the first three years, experience has an insignificant impact on bilateral trade. Beyond that, the benefit of experience quickly becomes apparent. For a country-pair with the median level of experience (six years), an additional year of trade increases bilateral exports in the long-run by 4.6 percent. A decade of experience increases bilateral trade by 32 percent in the short-run and by 68 percent in the long-run, compared to a country-pair that has yet to initiate trade.

To put things in perspective, the boost to bilateral trade from seven years of experience is akin to a country-pair sharing a common currency; at nine years, it's equivalent to joining a preferential trading agreement. However, for countries in the 75th percentile of experience (19 years), an additional year of trade increased bilateral exports by only 1.88 percent, indicating depreciation of and diminishing returns to experience.

We also show that experience matters more for country-pairs that are geographically distant, lack colonial ties, and do not share a common language or a common legal system. Prior work has used all such measures as proxies for unobserved trade costs. Experience, therefore, helps countries overcome dark trade costs.

Our analyses further indicate that experience increases the number of products exported, which economists name the extensive margin of trade. In other words, experience enables countries to expand trade in terms of exporting a larger number of different products rather than more of existing products. This finding suggests that trade experience spills across firms and industries, perhaps partly due to employees transferring know-how when switching employers or starting their own export-oriented firms.

Policy consequences

Our findings enable us to provide solutions to an important problem in economic development. Examining growth experience across countries and regions, we see only a subset of countries, mainly in Asia, have managed rapid and sustained export-driven growth. The inevitable question is why these countries have managed to become part of global value chains and emerged as export powerhouses whereas countries in Latin America and Sub-Saharan Africa have not.

Our study suggests that since experience reduces variable trade costs, initial differences in policies (export-driven policies in Asia vs. import substitution policies elsewhere) can lead to significant and persistent differences in trade and global value-chains participation.

It follows that policies that support early exporters, even temporarily, and facilitate experience sharing will lower unmeasured trade costs for all domestic firms and encourage more of them to venture into global markets. Depreciation of and diminishing returns to experience means that over time, countries in Latin America and Sub-Saharan Africa can yet overcome the advantage of traditional export powerhouses.

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About the research

"The Gravity of Experience" is published in Canadian Journal of Economics.