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The range of goods exported to the U.S. has increased substantially, with little evidence that tariff liberalization is a primary cause.

When Tariff Cuts Don't Boost Import Variety

by *Sshalab M. Mostashari*

Sustained growth of international trade since World War II has coincided with an array of trade agreements and gradual reduction of tariffs.

How much declining tariffs boosted commerce and the impact of liberalized trade rules on a country's standard of living have been a central focus of trade-policy economic research. The welfare effects of trade liberalization can be quite different when viewed from either of two perspectives—from the intensive margin, where liberalizing countries import more of the same goods, or from the extensive margin, where countries import a greater variety of items. If a trade policy's impact on the extensive margin is significant, the benefits of liberalization, or the costs of protection, are potentially much higher.

The distinction between intensive and extensive margins is quite important since countries' exports vary across industries and among trading partners, with commercial patterns changing over time. The range of goods countries trade tended to increase substantially following implementation of some preferential trading agreements that eliminated barriers.

However, the actual contribution of lower tariffs may be, in fact, quite modest relative to growth in the variety of exports constituting the extensive margin.

The Extensive Margin Matters

In many cases, the benefits of a lower tariff are seen in reduced consumer prices. If goods were already being consumed, this price decrease is directly observable. On the other hand, if liberalization yields a wider range of available goods, when consumers value variety, they benefit even if the prices of goods already imported don't change.



Price indexes for a given basket of goods are meant to reflect the cost of acquiring a certain level of consumer satisfaction. If a preference for variety exists, import price indexes should be adjusted to reflect the range of available goods. Ignoring a tariff reduction's effects on the extensive margin leads to overestimating the import price index and, consequently, underestimating the benefit of liberalization.

Evolution of U.S. Tariffs

U.S. trade policy varies across countries in accordance with a handful of bilateral and multilateral trade agreements. The most-encompassing obligations are dictated by membership in the World Trade Organization (WTO), which constrains the U.S. tariff on all member countries to the U.S.'s most-favored nation (MFN) rate.¹ WTO rules still allow the U.S. to offer lower tariffs to countries with whom it engages in formal trade agreements. Reductions in tariffs over time, through the WTO or other preferential arrangements, are achieved over a series of multilateral and bilateral negotiations. However, liberalization of U.S. trade in

recent years has been modest relative to trade growth.

I focus on changes occurring over two 10-year periods: 1989 to 1999 and 1996 to 2006, following the work of Debaere and Mostashari (2010).² These two intervals are particularly relevant for U.S. trade. The first straddles formation of the North American Free Trade Agreement (NAFTA) in 1994, which mandated the gradual elimination of barriers among member countries—the U.S., Canada and Mexico. The latter overlaps China's accession to the WTO in 2001.

Between 1989 and 1999, the average U.S. manufacturing tariff decreased by about 0.9 percentage points. Between 1996 and 2006, the average decrease was larger, 3.4 percentage points. Changes in average tariffs for NAFTA countries and for nations receiving MFN rates are shown in Chart 1. Not surprisingly, U.S. tariffs between 1989 and 1999 fell most for Canada, 4.8 percent, and Mexico, 3.1 percent. However, between 1996 and 2006, with NAFTA tariffs already low, MFN rate decreases dominated, averaging 4.9 percent.

Mexico's and Canada's increased trade with the U.S. resulting from NAFTA has been well documented. Less effort has gone into comparing countries that have experienced trade liberalizations with those that have not. Detailed trade data highlight two findings of particular interest. First, extensive-margin growth has been substantial for most countries, not just for Mexico and Canada. Second, there is no obvious relationship between U.S. tariff decreases and the extent of extensive-margin growth.

Summary statistics for 3,328 goods possibly exported by 177 countries are presented in Table 1. For the period 1989 through 1999, the extensive margin increased significantly, especially for Mexico. The nation exported 2,572 of the 3,328 possible goods categories in 1989, 1999 or both. Yet, 26 percent of those goods were newly traded post-NAFTA, and 10 percent of those goods stopped being traded post-NAFTA. Note

that the share of newly traded goods for Canada was less, 8 percent. This lower number isn't surprising, since bigger and more-developed countries tend to export more types of items. Moreover, given the finite number of goods as a share of a country's exports, the extensive-margin increase should be more manifest for less-developed countries.

In the most striking finding, many other countries whose tariffs with the U.S. did not decrease dramatically had comparably large shares of newly traded goods. For example, China exported 2,504 categories of goods in 1989, 1999 or both, and 34 percent of these traded goods were newly traded in 1999. Similarly, combining the rest of the countries' goods into a separate observation, 30 percent of traded goods were newly traded in 1999.

The shares of disappearing and new goods are presented in the last two columns of Table 1. Both columns suggest significant changes in the range of goods. The statistics reported for the period 1996–2006 show a persistent change in the extensive margin.

Newly traded goods' share of total traded goods is plotted against average changes in tariffs in Chart 2, which illustrates that extensive-margin growth was not limited to countries experiencing systematic U.S. tariff cuts. Furthermore, for a given tariff reduction, the importance of newly traded goods varied substantially across countries. For instance, nearly 40 percent of the goods China exported to the U.S. in 1999 were newly traded (*Chart 2A*). The importance of new trade for other countries receiving the same MFN tariff changes ranged from 11 percent of traded goods for Japan to 100 percent for several small developing countries. A similar situation prevails for the 1996–2006 period (*Chart 2B*).³

When Tariffs Don't Matter

These observations suggest that U.S. tariff reductions don't entirely explain why the extensive margin changes. This is also argued by Debaere and Mostashari (2010), who

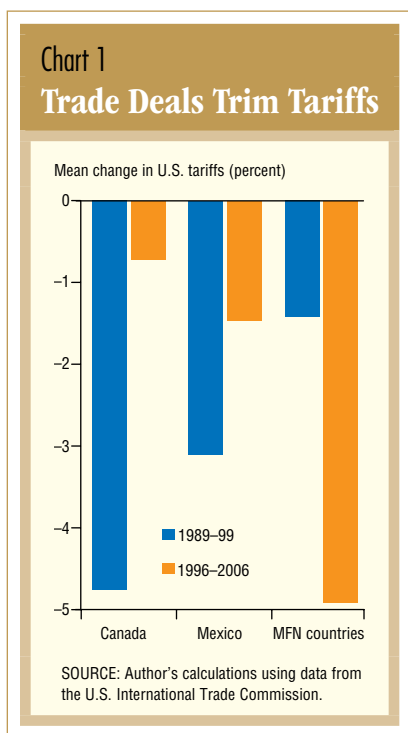


Table 1

Extensive-Margin Growth Is Substantial in Many Countries

1989–99						
Exporting country/group	All exported goods ¹	Shares of goods traded in 1989 or 1999			Disappearing goods' ² share of 1989 trade volume (percent)	Newly traded goods' ³ share of 1999 trade volume (percent)
		Newly traded ² (percent)	Disappearing ³ (percent)	Continuously traded ⁴ (percent)		
Canada	3,100	8.16	7.74	84.10	3.6	4.4
Mexico	2,572	26.44	10.30	63.26	6.7	9.6
China	2,504	33.59	5.99	60.42	2.3	5.1
Rest of the world	74,480	30.04	18.50	51.45	6.8	9.9
1996–2006						
Exporting country/group	All exported goods ¹	Shares of goods traded in 1996 or 2006			Disappearing goods' ² share of 1996 trade volume (percent)	Newly traded goods' ³ share of 2006 trade volume (percent)
		Newly traded ² (percent)	Disappearing ³ (percent)	Continuously traded ⁴ (percent)		
Canada	3,045	6.73	7.03	86.24	1.4	3.7
Mexico	2,641	14.24	12.87	72.89	1.5	4.8
China	2,958	29.18	2.13	68.70	0.6	3.5
Rest of the world	81,545	30.17	16.17	53.67	3.6	12.1

¹ Number of goods exported at the beginning or end of the time frame out of 3,328 manufacturing commodities.
² Goods exported at the end but not the beginning of the time frame.
³ Goods exported at the beginning but not the end of the time frame.
⁴ Goods exported both in the beginning and end of the time frame.

SOURCE: Author's calculations using data from the U.S. International Trade Commission and Debaere and Mostashari (2010).

estimate how changing the U.S. tariff rate affects the probability of a country exporting a particular good to the U.S. While they find that lower U.S. tariffs increase the range of goods that countries export, the contribution to extensive-margin growth does not seem economically significant. Between 1989 and 1999, U.S. tariff liberalization explained, at most, about 5 percent of the actual net growth in the range of goods that countries exported to the U.S., the authors discover. Between 1996 and 2006, owing mainly to the larger reductions in MFN tariffs, they find a greater but still small contribution of U.S. tariffs, explaining up to 12 percent of the export increase.

There are several likely reasons why tariffs don't seem to matter for the variety of goods the U.S. imports. In some instances, substantial fixed

costs must be incurred for firms to start exporting to a market. For example, there are expenses for learning about demand and for establishing a distribution system.⁴ Additionally, some countries may not have the technology to produce certain goods. In this case, firms would need to incur research and development costs or even royalties or license fees. Modest tariff reductions are insufficient to offset the fixed costs of entry. This suggests that cutting tariffs primarily helps increase exports already coming to market, those at the intensive margin.

These results leave open the question of what drives changes in the extensive margin. Country- and industry-specific factors, apart from U.S. tariff changes, make a bigger difference. The largest contributing factor is the change in real per-capita gross

domestic product, which, according to Debaere and Mostashari (2010), explains approximately 46 percent of the extensive margin growth between 1989 and 1999.

Influencing Export Variety

The range of goods exported to the U.S. has increased substantially, with little evidence that tariff liberalization is a primary cause, Debaere and Mostashari (2010) confirm. While these findings may be specific to the U.S. and the small tariff decreases in recent years, other factors related to productivity and economic growth appear to be more important in explaining increased export variety.

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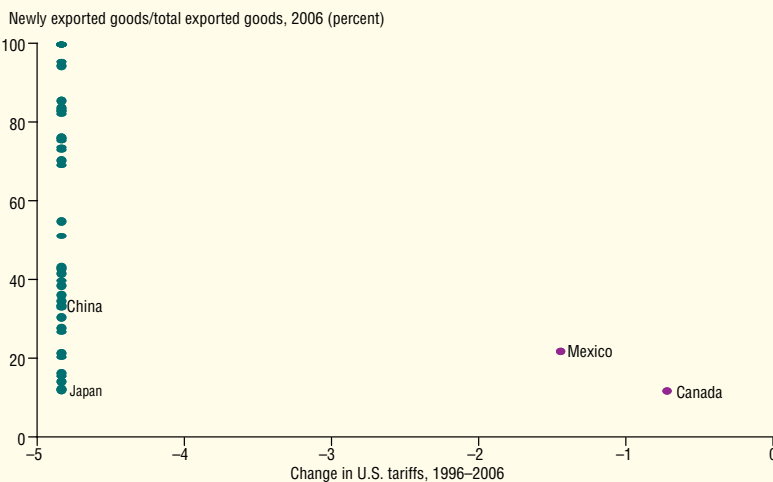
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Chart 2 Newly Traded Goods Not Related to U.S. Tariff Cuts

A. 1989–99



B. 1996–2006



NOTE: Each dot represents an individual nation's trade activity; purple = NAFTA countries, green = MFN countries.

SOURCE: Author's calculations using data from the U.S. International Trade Commission.

Notes

¹ As of July 2008, there were 153 member nations in the World Trade Organization.

² For technical details regarding the level of aggregation and the sampled countries, see "Do Tariffs Matter for the Extensive Margin of International Trade? An Empirical Analysis," by Peter Debaere and Shalah Mostashari, *Journal of International Economics*, vol. 81, no. 2, 2010, pp. 163–69.

³ A graph with newly traded goods' share of the value of trade looks much the same.

⁴ See "Entry, Expansion and Intensity in the U.S. Export Boom, 1987–1992," by Andrew Bernard and Bradford Jensen, *Review of International Economics*, vol. 12, no. 4, 2004, pp. 662–75, and "Why Some Firms Export," by Andrew Bernard and Bradford Jensen, *Review of Economics and Statistics*, vol. 86, no. 2, 2004, pp. 561–69.