

# Traders' Dilemma

## Developing Countries' Response to Trade Disputes

*Shantayanan Devarajan*

*Delfin S. Go*

*Csilla Lakatos*

*Sherman Robinson*

*Karen Thierfelder*



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## Abstract

If trade tensions between the United States and certain trading partners escalate into a full-blown trade war, what should developing countries do? Using a global, general-equilibrium model, this paper first simulates the effects of an increase in U.S. tariffs on imports from all regions to about 30 percent (the average non-Most Favored Nation tariff currently applied to imports from Cuba and the Democratic Republic of Korea) and retaliation in kind by major trading partners—the European Union, China, Mexico, Canada, and Japan. The paper then considers four possible responses by developing countries to this trade war: (i) join the trade war; (ii) do nothing; (iii) pursue regional

trade agreements (RTAs) with all regions outside the United States; and (iv) option (iii) and unilaterally liberalize tariffs on imports from the United States. The results show that joining the trade war is the worst option for developing countries (twice as bad as doing nothing), while forming RTAs with non-U.S. regions and liberalizing tariffs on U.S. imports (“turning the other cheek”) is the best. The reason is that a trade war between the United States and its major trading partners creates opportunities for developing countries to increase their exports to these markets. Liberalizing tariffs increases developing countries’ competitiveness, enabling them to capitalize on these opportunities.

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# Traders' Dilemma: Developing Countries' Response to Trade Disputes

Shantayanan Devarajan, Delfin S. Go, Csilla Lakatos, Sherman Robinson,  
and Karen Thierfelder\*

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\*Devarajan is the Senior Director of Development Economics and Acting Chief Economist of the World Bank Group. Go is a Consultant and former Lead Economist in the Development Prospects Group of the World Bank. Lakatos is a Senior Economist in the Development Prospects Group of the World Bank. Robinson is a nonresident senior fellow at the Peterson Institute for International Economics. Thierfelder is a Professor of Economics at the US Naval Academy. We thank Caroline Freund, Scott McDonald, and participants of a seminar at the UK Department for International Trade for their valuable comments. The views expressed in this paper are not those of the US Naval Academy, or the World Bank.

# 1 Introduction

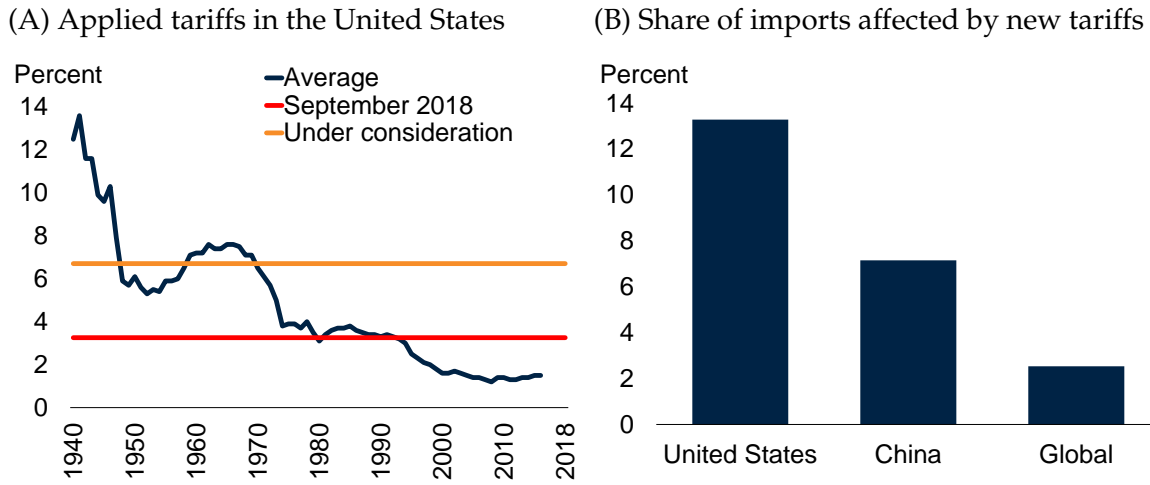
Tariffs introduced by the United States throughout 2018 and the retaliatory response of trading partners now affect close to \$450 billion of global trade, accounting for 13 percent of U.S. imports of goods and 2.5 percent of global goods trade. If all proposed increases in U.S. tariffs were to be implemented, average applied tariffs in the United States would more than quadruple from the current average of 1.6 percent to 6.7 percent, reaching rates not seen since the 1960s (Figure 1).

Faced with protectionist measures, numerous trading partners (China, Canada, Mexico, EU, Turkey, etc.) retaliated against higher U.S. tariffs, while others (the Republic of Korea, India, etc.) did not. In fact, apart from the trade disputes with the United States, there is no evidence of a worldwide increase in the number of protectionist measures. On the contrary, the average number of trade restrictive measures implemented by G20 economies has been declining and remains below 2012-2015 trends (WTO 2018). Most major economies have continued liberalization efforts, pursuing market access opportunities under regional trade agreements (RTAs). Since the beginning of 2017, there have been 10 RTAs that entered into force such as those between the EU and Canada, Canada and Ukraine, China and Georgia, etc. After U.S. withdrawal from TPP negotiations, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) was signed by the remaining 11 member countries in March 2018. Soon afterwards, leaders from more than 40 African nations endorsed a framework for establishing an African Continental Free Trade Area (CFTA). China also recently announced unilateral cuts in import tariffs on close to 1,600 products.

In light of these developments, policymakers in the rest of the world, and especially among developing countries, are grappling with the potential impact of, and the appropriate policy response to, U.S. protectionist measures. They are faced with the “trader’s dilemma”: should they join the trade war, stay out, or do something different, including continuing to pursue regional trading arrangements?

Other studies of recent trade tensions have focused on directly affected countries or on estimating the general costs of rising protectionism at the global level. Kutlina-Dimitrova and Lakatos (2017) examine the wide-ranging costs of potential increases in worldwide barriers to bound tariff rates and estimate that these could translate into an annual decline of global trade of 9 percent — more than was experienced during the global financial crisis of 2008-09. Robinson and Thierfelder (2018) argue that the disintegration of the North American trade bloc and a subsequent NAFTA trade war could result in significant damage to all three member countries – the United States, Mexico, and Canada - with the United States becoming more isolated in the global economy. Chepeliev et al. (2018) argue that retaliatory tariffs

Figure 1: U.S. tariffs introduced in 2018



Source: USITC, World Bank

A. Trade weighted averages.

B. Denominator reflects goods imports only. Tariffs implemented as of September 2018.

implemented by Canada and Mexico on U.S. agricultural exports in response to U.S. steel and aluminum tariffs will reverse the modest export gains from the newly negotiated US-Mexico-Canada Agreement (USMCA). Analyzing a scenario of a U.S. trade war with China and Mexico, Bouet and Laborde (2018) find that trade wars will not improve U.S. welfare and will harm China and Mexico as well as the global economy. Rutherford et al. (2018) estimate that the welfare costs of a trade war could be substantial, with losses concentrated in the United States and China, and small effects on other countries. Likewise, Zandi et al. (2018) establish that potential global trade wars will entail losses in U.S. GDP and jobs. If the trade tensions raise global uncertainty and lead to depressed investments in developing countries, Freund et al. (2018) estimate that the income losses in developing countries could range between 0.9 percent for South Asia and 1.7 percent for Europe and Central Asia.

Adding to the current literature, this paper examines the effects of alternative policy options for developing countries in response to the escalation of the trade dispute between the United States and its trading partners. As the exact nature of the current trade tensions is still evolving, we devise four different hypothetical counterfactual trade war scenarios

that imply different policy responses for developing countries.<sup>1</sup> Except for large countries with significant weight in global trade like China, most developing countries are small, open economies. Hence their optimal trade strategy need not consider possible retaliatory actions from other trading partners.<sup>2</sup> This simple yet realistic approach provides tractable solutions in analyzing their trade policy dilemma and policy recommendations.

In this paper, we consider four broadly defined strategies for developing countries in response to a potential trade war between major economies: a) join the trade war and retaliate against increases in U.S. tariffs; b) do nothing; c) pursue trade agreements with non-U.S. regions; and d) pursue trade agreements with non-U.S. regions and unilaterally liberalize tariffs on imports from the United States (in effect, “turning the other cheek” in response to higher U.S. tariffs).

The nature of current trade tensions between the United States and some of its major trading partners is still evolving, in terms of products affected, countries involved, and the level of tariffs. However, the newly introduced U.S. tariffs are comparable with “Column 2” or non-Most Favored Nation (MFN) tariff rates applied on U.S. imports from Cuba and the Democratic Republic of Korea, countries that do not benefit from “normal trade relations” (Lakatos 2018). For the most part, Column 2 tariffs are the original Smoot-Hawley tariffs that were applied to all U.S. imports under the Tariff Act of 1930, and average about 32 percent.

Against this background, we define several hypothetical scenarios in which the United States imposes non-MFN tariffs on imports from all trading partners, which prompts a retaliation in kind by major trading partners. In what follows, countries involved in an escalated trade dispute with the United States are China, Mexico, Canada, European countries, and high-income countries in Asia. The response of developing countries (except that of China and Mexico which are assumed to be engaged in an escalated trade dispute with the United States) is considered.

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<sup>1</sup>The purpose of this paper is not to examine the impact of the current trade tensions. In practice, the increases in tariffs introduced in 2018 targeted specific countries and products, but their coverage is also shifting over time. For example, NAFTA has been replaced by the USMCA. The United States is also pursuing agreements with the EU and Japan, but no details have been settled yet. For these reasons, the scenarios defined in this paper are hypothetical.

<sup>2</sup>The latter would require a non-cooperative or cooperative game framework, e.g. as in Harrison and Rutström (1991), Riezman (1982), Otani (1980), and Johnson (1951-52 and 1953-54). Although free trade is considered the most efficient way to allocate world resources (e.g., Bhagwati 1964), countries with monopoly power in trade may initiate trade wars, and the resulting retaliation would result in a tariff structure that is far from free trade.

The analysis is based on a multi-country, multi-sector computable general equilibrium (CGE) model of global trade, called the GLOBE model.<sup>3</sup> As with the recent studies cited above, this type of modeling framework is extensively used for the analysis of the economy-wide implications of changes in trade policy.

Section 2 of the paper defines the scenarios. Section 3 briefly describes the methodology. Section 4 examines the results and Section 5 concludes.

## 2 Scenarios

Since the beginning of 2018, the United States has introduced new tariffs on imports from several trading partners citing either national security concerns, unfair trade practices, or serious injury to domestic industries. Initially, protectionist measures targeted specific products such as washing machines, solar panels, steel, and aluminum and were imposed on imports from most trading partners. Additional tariffs were imposed on imports of certain products from China, which, following a tit-for-tat escalation of the dispute, now cover close to all bilateral trade between the two countries. If threatened tariffs on automobiles and parts materialize, they will cause serious disruptions to tightly integrated regional and global value chains (GVCs) and, together with previous measures, impact close to one-third of all U.S. imports.

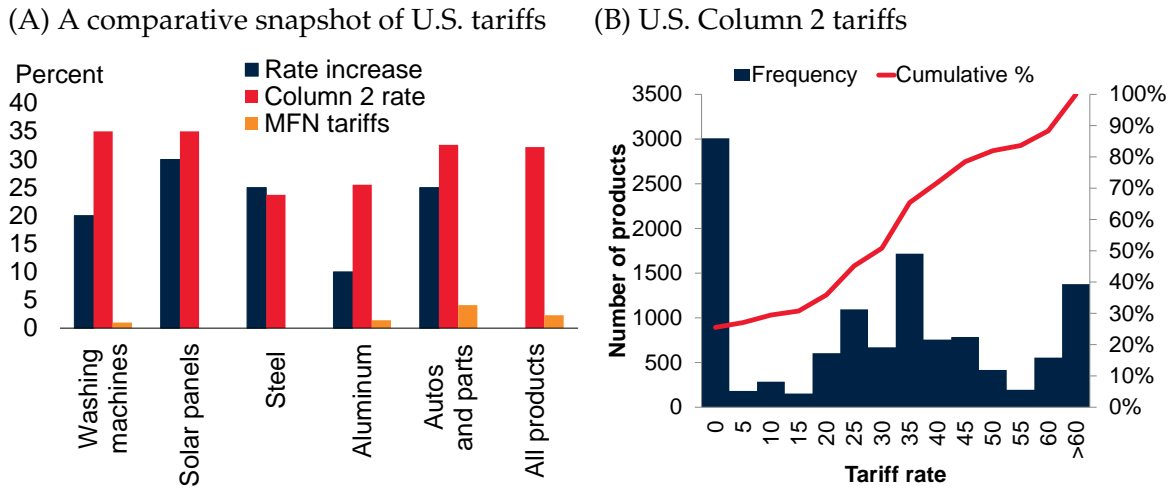
Evidence suggests that newly introduced U.S. tariffs are comparable to “Column 2”, non-MFN tariffs (Lakatos 2018) of the U.S. harmonized tariff schedule (HTS). The HTS Column 2 tariffs average about 32 percent, and for the most part are the original Smoot-Hawley tariffs formalized under the Tariff Act of 1930. During subsequent rounds of negotiations and trade liberalization under the umbrella of the General Agreement on Tariffs and Trade (GATT) and the WTO, the United States significantly amended the column 2 rates over time. Figure 1 highlights how average U.S. tariffs have fallen since the 1930s and how recent increases compare using a long-term perspective.

Currently, Column 2 tariff rates apply to U.S. imports from Cuba and the Democratic Republic of Korea, countries that do not benefit from “normal trade relations (NTR).” At different points in time, the United States also revoked the NTR status of other countries, and their exports to the United States were subject to Column 2 tariffs. For instance, under the Trade Agreements Extension Act of 1951, the United States suspended the use of MFN tariffs on

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<sup>3</sup>See McDonald et al. (2007) and McDonald and Thierfelder (2016) for a description of the model. The model uses data from the GTAP database. See Aguiar et al. (2016) for a description of the GTAP data.

Figure 2: U.S. MFN and Column 2 tariffs



Source: USITC.

A. Trade weighted averages.

B. Based on the 2018 8-digit HTSUS harmonized tariff schedule of the United States and 11,796 product lines. Specific tariffs are not represented. Tariffs on washing machines and solar panels: above-quota safeguard tariffs to be applied in the first year. Tariffs on autos and parts are not yet official.

imports from countries of the Soviet Union and others under communist control, except Yugoslavia. The Jackson–Vanik amendment to the Trade Act of 1974 withheld NTR status from communist, non-market economies that restricted the freedom of emigration and other human rights.

China, the biggest in the group of non-market economies, was first granted non-discriminatory MFN status in 1980. This was, however, subject to annual renewal and even in the absence of actual changes in U.S. tariffs, introduced a great deal of uncertainty and political controversy in US-China trade relations. Every year between 1990 and 2001, the U.S. Congress introduced, but failed to pass, legislation to revoke China’s NTR status. Finally, in 2000, China was granted permanent normal trade relations (PNTR) status, also facilitated by its accession to the WTO in 2001. Close to two decades after granting China PNTR status, there is still substantial controversy that surrounds China’s non-market economy status as well as the impact of China’s WTO accession and PNTR status on the decline in U.S manufacturing.

Against this background, it is hard to ignore similarities between the recently imposed U.S. tariffs and the general protectionist nature of Smoot-Hawley-inspired Column 2 tariffs (Fig-



ure 2). For instance, the trade-weighted average of Column 2 tariffs on steel products is about 23.7 percent, very much in line with the newly introduced steel tariffs of 25 percent. A potential 25 percent tariff on autos and auto-parts would be commensurate with Column 2 average tariffs at 32.6 percent and much higher than the current average MFN rate of 4.1 percent. Withdrawing PNTR status from China or any other member of the WTO would violate U.S. commitments. However, a potential U.S. withdrawal from the multilateral trading system and the WTO could be accompanied by a shift of all U.S. tariffs to Column 2 rates.

In this paper, the baseline (business-as-usual) scenario is defined as one in which pre-2018 U.S. tariff rates are maintained. The impact of all counterfactual scenarios is reported relative to the baseline scenario. All counterfactual scenarios assume an increase in U.S. tariffs to Column 2 rates and retaliation in kind by major trading partners. Counterfactual scenarios differ in terms of the response of developing countries, which are defined as follows:

- **Join the trade war:** the United States imposes non-MFN tariffs on imports from all regions; major trading partners retaliate. In this scenario, developing countries also retaliate against higher U.S. tariffs.
- **No action:** the United States imposes non-MFN tariffs on imports from all regions; major trading partners retaliate. In this scenario, there is no change in developing countries' trade policy.
- **RTAs with non-US:** the United States imposes non-MFN tariffs on imports from all regions; major trading partners retaliate. In this scenario, developing countries pursue regional trade agreements with all non-US regions. There is no change in developing countries' trade policy vis-a-vis imports from the United States.
- **Turn the other cheek:** the United States imposes non-MFN tariffs on imports from all regions; major trading partners retaliate. In this scenario, developing countries pursue regional trade agreements with all non-US regions and they fully liberalize imports from the United States.

Some additional considerations are noteworthy. When Smoot-Hawley tariffs were imposed in the 1930s, the United States and the other industrialized nations dominated world commerce, so that the extreme levels of protection among these countries caused serious disruptions to world trade and exacerbated the Great Depression.<sup>4</sup> Since then, the share of the United States in global goods exports has declined from about 17 percent in 1950 to 8.7

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<sup>4</sup>Seer Irwin (2017) for an extensive discussion of trade policy during that period.

percent in 2017. Hence, a potential U.S. disengagement from the world trading system will not have the same level of disruptive effects. Nevertheless, the United States, Europe, and China still account for about half of current world trade. So, the current disputes that involve these countries are expected to have significant spillovers on the rest of the world. As globalization boosted the integration of developing countries in the world economy, would the trade diversion resulting from the trade war benefit these countries? Or would GVC linkages in which developing countries provide more and more inputs to world trade hurt them instead? Are retaliatory measures justified, or should developing countries pursue trade liberalization measures? These are the questions the simulations seek to answer.

### 3 Methodology

The analysis uses the GLOBE computable general equilibrium model calibrated to version 9 of the data of the Global Trade Analysis Project (GTAP) with 2011 as the base year. The model is comparative static and is a member of a family of CGE models that model trade relationships using principles described in the 1-2-3 model (de Melo and Robinson 1989; Devarajan et al. 1990) and standard multi-sectoral versions for developing countries (Dervis, de Melo, and Robinson 1982).

A range of possible developing country strategies is compared to the baseline scenario, capturing the marginal effects of different counterfactual scenarios. This ex-ante approach follows the rich tradition of using CGE analysis to examine policy issues in developing countries, such as the long-term effects of international trade agreements like the Doha Development Round (Hertel et al. 2009), effects of global protectionism (Kutlina-Dimitrova and Lakatos 2017), disintegration of NAFTA (Robinson and Thierfelder 2018), stress-testing Africa's growth and poverty performance (Devarajan et al. 2011), trade reform in India (Go and Mitra 1999) or carbon tax and climate change in South Africa (Devarajan et al. 2011).

For the analysis, the world is divided into 18 regions. We define 16 sectors (see Table 2 in the Appendix). Column 2 U.S. tariffs by commodity and region are reported in Table 3 in the Appendix.

A balanced macro closure is specified so that macro expenditures adjust to income changes by fixing the value share of final demand for government purchases, investment purchases, and household purchases. This closure gives an even impact on changes in consumption by government, investors, and households as income changes due to changes in tariff revenues. Such a formulation matters for the sectoral results because different agents have different spending patterns; for example, investors have high expenditure shares on construction.

The model assumes full-employment except for unskilled workers in developing regions. For workers in these regions, the unskilled wage is fixed and there is an endogenous supply of unskilled workers available to the economy at the fixed wage. The model is solved as a mixed complementarity problem (MCP) such that once the pool of available unskilled workers is empty, the economy operates at full-employment (i.e., wages are endogenous and the supply of unskilled labor is fixed). Current account balances are held constant so that real foreign exchange rates adjust.

The trade elasticities take the high Armington elasticities (between aggregate imports and the domestic good) from GTAP estimates for regions involved in the trade dispute. In contrast, low elasticities (0.5) are assumed for other regions. With this specification, it is assumed that imports are poor substitutes for domestic goods in developing regions.

Some caveats about the analysis are also in order. The version of the GLOBE employed in the analysis is a static global CGE model with neoclassical specifications. Since it is not a dynamic framework, it does not account for additional output growth that may come from factor accumulation in response to the trade shocks.<sup>5</sup> It does, however, reallocate existing capital stocks and labor across sectors for each region. The modeling framework does not account for the presence of imperfect competition, scale economies, and the entry or exit of firms that may broaden the effects of trade shocks (Rutherford et al. 2018; Devarajan and Rodrik 1989; Harris 1984). It also does not specify extraneous productivity effects of trade shocks. As a result, GDP effects will generally be small, which is normal for this type of trade model. Without incorporating these additional factors, the analysis is therefore conservative. The results are also insensitive to the assumption of excess unskilled labor in developing countries. Sensitivity tests indicate that the results from the specification do not differ much or qualitatively from a full-employment specification throughout.

## 4 Results

The detailed results of the simulations are summarized in Table 1. Consistently throughout all scenarios, the decline in U.S. competitiveness resulting from higher tariffs and the loss of market access with major trading partners leads to significant adverse effects on the U.S. economy. Total U.S. exports are estimated to decline by 11-12 percent and translate into GDP losses of 0.3 percent relative to the baseline.

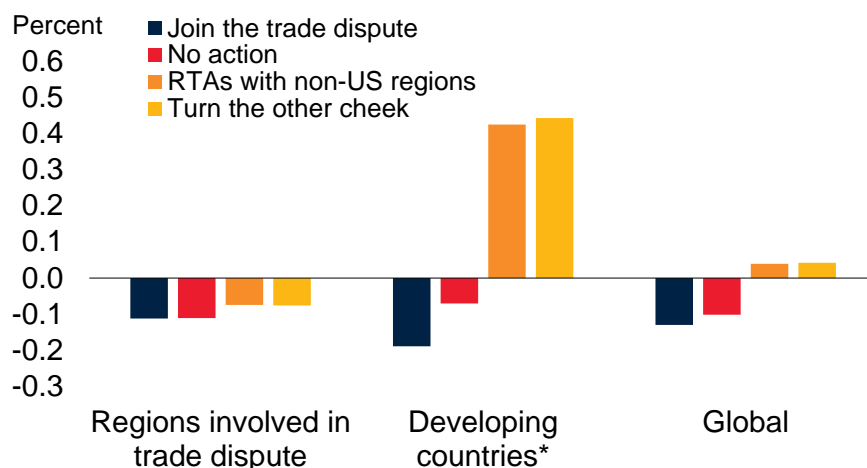
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<sup>5</sup>For example, Freund et al. (2018) find more significant income effects due to additional assumptions about a potential increase in uncertainty and decline in investment in developing countries. Also, their results are reported in value terms, which, compared to real terms in this paper, tend to be more substantial given the significant shifts in relative prices.

Other advanced economies involved in the trade dispute would also be hurt but by much less. Their exports to the United States would fall significantly, ranging from about 5 to 12 percent, and on average by 10.6 percent, relative to the baseline. As these countries reorient their exports, diverting trade around the United States, the adverse effect on their total exports is much less, a decline by 2.2 percent. Canada and Mexico, tightly integrated with U.S. markets, are an exception, and are likely to experience significant losses, with an estimated 0.4 percent decline in GDP in each country.

In response to the higher tariffs on their exports to U.S. markets, developing countries may be tempted to retaliate with their own tit-for-tat measures. While these would help recapture some of their terms of trade losses, the results suggest that in terms of aggregate effects, efficiency losses would dominate any terms of trade gains (Figure 3).

Figure 3: Alternative strategies for developing countries: impact on GDP

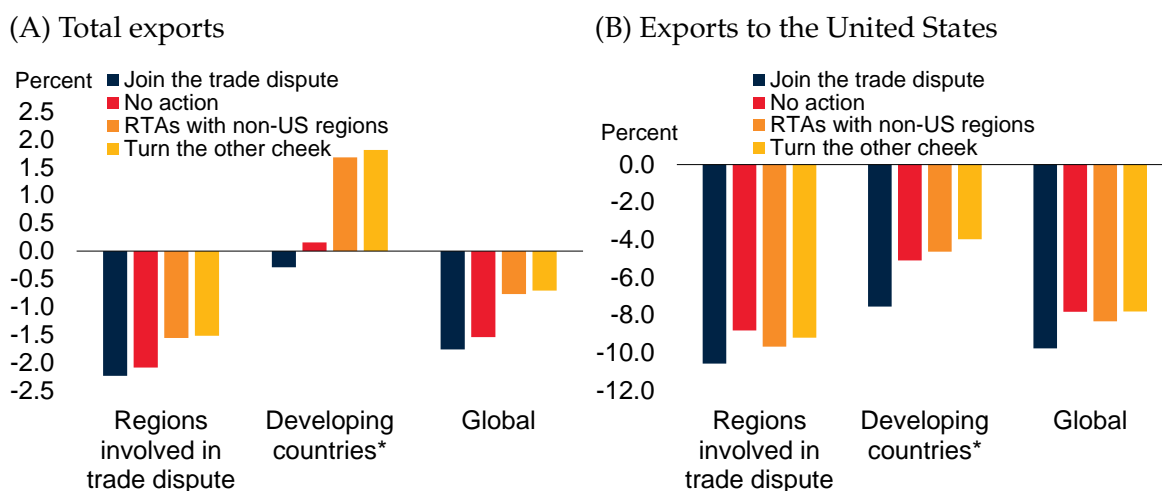


Source: Authors' simulations.

Note. Comparative static results. Percent deviation from the baseline in real GDP. All scenarios assume an escalated trade dispute between the United States on the one hand, and China, Mexico and other high-income countries (regions involved in trade dispute), on the other hand. \*Developing countries other than China and Mexico.

For developing countries, joining the trade dispute is found to be the least desirable strategy, translating into GDP losses of 0.2 percent and a decline in exports of 0.3 percent. Compared to no action, aggregate losses are nearly twice as big if retaliatory measures are imposed.

Figure 4: Alternative strategies for developing countries: impact on exports



Source: Authors' simulations.

Note. Comparative static results. Percent deviation from the baseline in real exports. All scenarios assume an escalated trade dispute between the United States on the one hand, and China, Mexico and other high-income countries (regions involved in trade dispute), on the other hand. \*Developing countries other than China and Mexico.

The results also show that developing countries could reap significant benefits from a cooperative response, i.e., trade liberalization and increased intra-regional integration. The negative effects of U.S. protectionist measures could be mitigated by pursuing regional trade agreements with non-US regions. This strategy could boost developing countries' GDP by 0.4 percent and exports by 1.7 percent.

"Turning the other cheek", unilateral liberalization in response to higher U.S. tariffs, could benefit countries in Latin America and the Caribbean that are highly interconnected with the U.S. economy but does not significantly alter beneficial results for other developing countries.

Looking at the results in detail, countries and regions closely linked to the United States through trade are expected to be hurt the most by a trade war. These include Canada, Mexico, Central America, and the Caribbean. For the rest of Latin America, although exports to the United States decline, aggregate effects on their GDP and total exports are ameliorated compared to the others. Among other developing countries, India gains or does comparatively better in all scenarios because it has a large supply of excess unskilled labor, and

output expands in labor-intensive sectors, particularly other agriculture, to meet the new demand from countries involved in the dispute.

Although the United States plays a major role in the world economy, accounting for close to a quarter of global GDP, the expansion of China and other developing countries has reduced its relative importance in the global trading system. In 2016, the United States accounted for 8.7 percent of all goods exports and 13.3 percent of goods imports (World Development Indicators, World Bank). With the exception of Canada, Mexico and several Central American economies, the United States is not a major trading partner for many economies. The majority of EU trade is intra-EU. Europe is Africa's main export destination. Globally, the United States is less important than high-income Asia or Europe in terms of total trade. Faced with an increasingly inward-looking United States, the global trading system will likely rebalance and adjust.

There are a few important findings that emerge from this work:

- Retaliatory action by developing countries is the least desirable strategy in the face of new protectionist measures. No action is preferred to retaliation, as aggregate losses are found to be nearly twice as big when developing countries impose retaliatory measures.
- No action could translate into benefits for developing countries if they can respond to trade diversion opportunities in regions involved in the trade dispute.
- Trade liberalization and improved intra-regional integration could not only help offset the negative terms of trade effects of increased protectionism on developing countries, but also represent significant benefits that are, so far, untapped.
- "Turning the other cheek" could benefit countries in Latin America and the Caribbean that are deeply interconnected with the United States, the source of most of their imports.
- Faced with an increasingly inward-looking United States, the world trading system will likely rebalance and adjust, reinforcing existing trade ties and creating new ones.

## 5 Conclusion

Faced with escalating protectionist measures and a potential trade war between major economies, policymakers in developing countries are grappling with the impact of these measures on their domestic markets and the choice between different policy responses. In this paper,

we explored the impact of four broadly defined strategies: a) join the trade war and retaliate; b) do nothing; c) pursue trade agreements with non-U.S. regions; and d) pursue trade agreements with non-U.S. regions and unilaterally liberalize tariffs on imports from the United States (in effect, "turning the other cheek" in response to higher U.S. tariffs).

The most feasible and politically least controversial response is that of no action. If developing countries refrain from retaliatory action, they stand to gain from the trade diversion arising from a potential trade war between major economies. Although their exports to the United States are estimated to decline by 5.1 percent relative to the baseline, total exports increase. Moreover, total exports, exports to the United States, and GDP performance improve across the board relative to the "join the trade war" scenario. No action is preferred to retaliation, as aggregate losses are found to be nearly twice as big when developing countries impose their own retaliatory measures.

The results also highlight that policymakers in developing countries can play a pro-active and important role in ameliorating the damaging impact of escalating trade restrictions on their economies. By progressively liberalizing, pursuing RTAs and working within the WTO framework, they could not only help offset the negative terms of trade effects of increased protectionist measures, but also realize untapped benefits.

Table 1: Alternative strategies for developing countries: estimated impact

	Join the trade war			Do nothing			Non-US RTAs			Turn other cheek		
	GDP	Exports	Exp to US	GDP	Exports	Exp to US	GDP	Exports	Exp to US	GDP	Exports	Exp to US
Involved in dispute												
United States	-0.3	-11.7		-0.3	-10.8		-0.3	-11.1		-0.3	-10.9	
China	-0.1	-0.5	-10.9	-0.1	-0.4	-8.9	-0.1	0.9	-10.7	-0.1	0.9	-10.2
EU-28	0.0	-0.4	-8.0	0.0	-0.4	-6.0	0.0	-0.1	-6.8	0.0	-0.1	-6.3
Other Europe	0.0	-0.3	-4.8	0.0	-0.3	-2.6	0.2	0.3	-3.6	0.2	0.3	-3.0
Mexico	-0.4	-7.0	-12.3	-0.4	-6.7	-11.3	-0.4	-5.3	-9.9	-0.4	-5.2	-9.6
Canada	-0.4	-5.4	-12.4	-0.4	-5.1	-11.2	-0.4	-4.6	-11.4	-0.4	-4.5	-11.1
High Income Asia	0.0	-0.9	-12.1	0.0	-0.8	-10.1	0.1	0.1	-12.0	0.1	0.2	-11.5
Total	-0.1	-2.2	-10.6	-0.1	-2.1	-8.8	-0.1	-1.6	-9.7	-0.1	-1.5	-9.2
Developing countries*												
Brazil	0.0	-0.5	-8.6	0.0	0.2	-5.2	0.4	2.1	-4.8	0.4	2.5	-3.9
Rest of Latin America	-0.5	0.5	-17.6	-0.2	1.6	-15.2	0.0	2.4	-15.1	0.1	2.7	-14.5
Central Amer. and Carib.	-1.4	-4.6	-15.5	-0.6	-1.5	-9.9	0.4	1.1	-8.4	0.6	2.1	-6.7
MENA	-0.2	0.1	-1.2	-0.1	0.2	0.7	0.3	1.0	0.7	0.3	1.1	1.2
Nigeria	0.3	-0.2	5.2	0.5	-0.1	6.1	0.6	0.1	5.8	0.7	0.1	6.0
SACU	-0.2	-0.6	-10.5	-0.1	0.0	-7.9	0.4	1.2	-8.8	0.4	1.2	-8.2
Rest of Africa	0.0	-0.1	1.7	0.1	0.0	3.3	1.2	2.4	4.4	1.3	2.5	4.8
Former Soviet Union	-0.2	0.4	-3.8	-0.1	0.5	-2.0	0.1	1.2	-2.1	0.1	1.3	-1.6
India	0.1	-0.8	-7.9	0.1	-0.6	-5.5	0.8	2.4	-4.4	0.8	2.5	-3.7
Rest of South Asia	-0.1	-1.6	-12.7	0.0	-1.3	-10.6	0.7	4.1	-7.0	0.7	4.2	-6.4
Rest of Asia	-0.3	-0.8	-13.4	-0.1	-0.1	-10.7	0.7	2.2	-9.8	0.7	2.4	-9.0
Total	-0.2	-0.3	-7.5	-0.1	0.2	-5.1	0.4	1.7	-4.6	0.4	1.8	-4.0
Global	-0.1	-1.8	-9.8	-0.1	-1.5	-7.8	0.0	-0.8	-8.3	0.0	-0.7	-7.8

Source: Authors' simulations.

Note. Comparative static percent deviation from the baseline in real GDP and exports. All scenarios assume an escalated trade dispute between the United States on the one hand, and China, Mexico and other high-income countries (regions involved in trade dispute), on the other. \*Developing countries other than China and Mexico.



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Table 2: Sectoral aggregation

GTAP sectors	GTAP Description	Aggregation
pdr	Paddy rice	Cereals
wht	Wheat	
gro	Cereal grains nec	
osd	Oil seeds	Oil seeds
v_f	Vegetables fruit nuts	Other Agriculture
c_b	Sugar cane sugar beet	
pfb	Plant-based fibers	
ocr	Crops nec	
ctl	Cattle sheep goats horses	
oap	Animal products nec	
rmk	Raw milk	
wol	Wool silk-worm cocoons	
frs	Forestry	
fsh	Fishing	
coa	Coal	Mining
oil	Oil	
gas	Gas	
omn	Minerals nec	
cmt	Meat: cattle sheep goats horse	Food, beverages and tobacco
omt	Meat products nec	
vol	Vegetable oils and fats	
mil	Dairy products	
pcr	Processed rice	
sgr	Sugar	
ofd	Food products nec	
b_t	Beverages and tobacco products	
tex	Textiles	Textiles, apparel and leather products
wap	Wearing apparel	
lea	Leather products	
crp	Chemical rubber plastic prods	Chemicals
lum	Wood products	Final manufactures
ppp	Paper products publishing	
omf	Manufactures nec	
nmm	Mineral products nec	Intermediate manufactured goods
i_s	Ferrous metals	
nfm	Metals nec	
fmp	Metal products	
mvh	Motor vehicles and parts	Motor vehicles and parts
otn	Transport equipment nec	Other transport equipment
ele	Electronic equipment	Electronics and machinery
ome	Machinery and equipment nec	
p_c	Petroleum coal products	Energy
ely	Electricity	
gdt	Gas manufacture distribution	
wtr	Water	Other services
cns	Construction	
trd	Trade	
ros	Recreation and other services	
osg	Pub Admin Defence Health Educat	
dwe	Dwellings	
otp	Transport nec	Transportation services
wtp	Sea transport	
atp	Air transport	
cmn	Communication	Business services
ofi	Financial services nec	
isr	Insurance	
obs	Business services nec	

Table 3: Bilateral Column 2 U.S. tariffs

	Autos, parts	Cereals	Chemicals	Energy	Final manuf	Food	Interm.	Machinery	Mining	Oilseeds	Other agric	Textiles	Transp. equip.
Brazil	26.5	20.3	29.7	18.9	25.5	18.3	21.3	36.6	30.0	15.0	14.5	22.5	47.3
Central Am. and Carib.	14.6	26.7	27.7	22.1	39.6	34.2	15.4	30.0	28.6	1.8	24.1	62.5	23.8
Canada	36.6	27.2	30.5	18.3	36.1	25.7	24.7	34.8	36.7	25.3	29.3	40.3	46.8
China	28.3	15.5	37.0	10.3	34.0	28.2	36.1	31.7	16.9	7.5	16.8	40.4	37.3
EU28	32.8	20.7	29.3	10.2	28.7	29.6	31.9	33.2	28.9	4.0	30.9	36.1	41.9
FSU	41.2	19.7	25.4	29.3	37.3	24.7	26.4	35.8	2.5	3.0	32.5	42.8	48.1
High Income Asia	34.5	8.0	32.2	8.4	33.8	26.0	32.9	36.3	23.8	7.6	20.9	40.4	41.5
India	29.9	26.6	28.2	18.8	40.0	24.0	33.9	32.8	39.7	1.1	16.5	39.0	46.8
MENA	35.3	24.1	29.7	21.7	36.2	32.1	30.0	33.7	6.6	13.5	18.5	56.4	46.1
Mexico	29.6	32.2	33.0	35.3	35.8	20.7	27.8	29.3	48.7	15.2	27.5	42.6	45.2
Nigeria	51.5	10.0	43.7	46.7	6.5	29.3	3.8	39.1	0.5	0.7	19.0	43.6	25.9
Rest of Africa	43.4	9.4	49.3	26.7	36.0	23.0	17.5	30.6	4.6	10.7	18.3	53.9	64.0
Rest of Asia	31.0	1.8	32.4	15.9	37.0	22.6	36.4	39.1	1.1	13.1	9.9	46.6	34.1
Rest of Europe	21.9	29.7	23.1	17.3	34.6	24.4	29.6	30.8	1.6	0.7	10.4	40.4	43.6
Rest of Latin America	20.9	13.2	34.9	37.2	29.6	29.8	20.6	33.7	44.3	11.9	24.2	51.9	35.6
Rest of South Asia	20.6	29.2	28.2	0.0	42.7	22.3	29.4	34.3	42.3	0.0	35.7	45.3	25.3
SACU	25.9	10.0	31.5	36.1	37.2	37.7	31.7	47.0	8.1	14.6	12.5	39.2	19.8

Source: USITC.

Note. Trade weighted averages.