Global Adjustment to US Disengagement from the World Trading System

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While current US trade policy appears contradictory and incoherent, there is a recurring thread in the public statements of various officials, including the President, that suggests support for a long-run strategy of bringing manufacturing back to the US by protecting domestic markets from imports.[2] The apparent US goal is to reverse the process of off-shoring of supply chains, pursuing an industrial strategy of import-substitution industrialization that was favored by many countries until the latter quarter of the twentieth century. The US would seek to withdraw from the globalization process that has enhanced productivity and growth in many sectors over the past thirty years.[3]

The approach that the US has taken is to impose high tariffs on a variety of commodities outside of the World Trade Organization (WTO) framework, and to threaten more in the future. US trading partners responded by threatening retaliation, also outside of the WTO. Tentative truces are in place with major trade partners (e.g., Japan and the European Union) and the only trade war currently underway is with China, with the recent possibility of a truce. In this uncertain environment, it is salutary to consider what would be the costs to the US and other countries if trade wars occur, and how should trade partners respond to increased US protectionism.

The US policy of operating outside of the WTO rules has led to growing concern that the US is seeking to undermine and perhaps destroy the rules-based trading system centered on the World Trade Organization (WTO), returning world trade to the protectionist and chaotic conditions of the 1930s.[4] US withdrawal from participation in global trade under WTO rules would represent a sea change in the workings of the global economy. Can the rest of the world maintain the momentum for global integration and adapt, with little cost, to a reduced role of the US in world trade? Or will US withdrawal bring down the entire rules-based global system?

Tentative answers to these two questions are "yes" and "no". Experience so far is that the rest of the world is moving ahead with many new regional trade agreements, without the US, supporting deeper integration and the rules-based system, except in their relations with the US. Powerful economic forces have been at work over the post war period expanding trade and fostering economic integration that provide the basis for an optimistic view of the world's ability to continue these trends without continued US participation.[5]

In this paper, we first examine the broad trends in global trade in the post-war period, focusing on trends in regional as well as global integration. We then consider long-run scenarios of increased US import protection and the implications of possible reactions by the rest of the world. We consider two questions: (1) Is a policy of trade diversion away from the US toward other markets feasible? and (2) What are appropriate policy choices for countries in this new global environment?

Our conclusions are:

- In the longer run, diversion of global trade flows away from the US as it moves to a protectionist trade regime, and perhaps withdraws from the WTO, is feasible. The US is

[2] Recent US tariff increases under Sections 301 (unfair trade) and 232 (national security), and public statements by President Trump, Wilbur Ross and Peter Navarro, are consistent with this view. Ross and Navarro have explicitly stated that the goal is to support US manufacturing by bringing supply chains back to the US.
[3] See for example, Baldwin (2016). For a timeline on US trade policy in the Trump administration, see Brown and Kolb (2018).
[4] See Posen (2018) in *Foreign Affairs* for a discussion of scenarios of US withdrawal from the global trading system.
[5] See Sandbu (2018) who argues for this view.

no longer the hegemon in the world trading system that it was in the middle of the last century. Europe and East and Southeast (E&SE) Asia have grown into large, interconnected and integrated regional economies that are comparable to the US in size and that have a much larger presence in global markets. In time, US trading partners can divert trade around the US with modest changes in their bilateral trade shares and a modest impact on the volume of global trade.

- A policy of broad-based protection of US industry from import competition has unintended consequences. The economy is a complex web of linked sectors and value chains, with indirect feedback effects through changes in trade, demand for intermediate inputs, final demand, and macro forces. We find that the net effect of a policy of import protection for manufacturing and withdrawal from the global economy ends up damaging rather than helping US manufacturing.
- Trade wars have no winners. Major trading partners may find it politically impossible not to respond to US tariff increases with increases against the US. We find that the best policy for other countries is to "sit out" a trade war, accepting increased US protectionism without retaliation and gaining from the resulting trade diversion.[6]
- All non-US countries gain from a policy of increased trade liberalization among themselves, fostering deeper integration within the rules-based WTO system, excluding the US. In this environment, a policy of not engaging in a trade negotiation with the US if it insists on operating outside the WTO framework would make sense.

We have no modern experience with trade wars, so we cannot look for guidance on their potential impact from post-war historical data. The experience of the 1930s should provide a warning but that was a chaotic period with many economic and political shocks in play. With only noisy lessons from history, we turn to scenario analysis for guidance. We use a structural simulation model of the global economy that captures direct and indirect economic connections, within and between countries. The model includes 16 countries/regions, 42 sectors, 5 labor categories, and 3 other factors of production (land, capital, and natural resources).[7] We use the model to do scenario analysis: "what if" simulations of the impact on the global economy of different trade policy regimes. These scenarios are not forecasts, but projections of alternative futures under different assumptions about US policy behavior and reactions by other countries.

The core scenario is that the US imposes an additional tariff of 30 percentage points on all imports from all its trading partners—a rate similar to the Smoot-Hawley tariffs of the 1930s.[8] In all scenarios, US trade partners do not change tariffs among themselves—trade disputes are limited to trade with the US.[9]

[6] In a related study, Devarajan *et al.* (2018) find that the best response for developing countries is to avoid engaging in a trade war and to continue to pursue free trade agreements.

[7] The model is called GLOBE and is built on the GTAP data base. See McDonald et al., (2007) and McDonald and Thierfelder (2016) for a description of the model and Aguiar (2106) for a description of GTAP data base, version 9.

[8] See Irwin (2017) for a history of the Smoot-Hawley tariffs. Brown and Irwin (2018) discuss the potential impact on US tariffs of US withdrawal from the WTO, citing the Smoot-Hawley tariffs. See also Devarajan et al. (2018) who consider a similar scenario.

[9] There are studies of scenarios where trade wars spread globally, with larger impacts than we find in our more limited trade war scenarios. See, for example, Kutlina-Dimitrova and Lakatos (2017) and Bouet and Laborde (2017).

Post-War Evolution of Interconnected Regional Economies (ICREs)

In the immediate period after World War II, the world economy was dominated by the US, which had the largest economy and a hegemonic position in world trade. With post war recovery, Europe grew rapidly and moved from being a region of warring states to become an interconnected regional economy (ICRE) characterized by deep economic, social, and institutional integration. An ICRE can be viewed as a collection of countries with a deep network of trade relations and which have higher trade shares with one another than they do with countries outside the region.[10]

In Europe, institutional integration followed economic integration. Deepening of trade relations preceded by many years the formal adoption of regional trade agreements such as the Treaty of Rome (1957) and the formation of the European Union (1992). Economics drove agreements rather than vice versa. Today, Europe is a tightly integrated ICRE whose share of global GDP is as large as the US, and which accounts for a much larger share of global trade than the US (Table 1).

In North America, economic integration of Canada, Mexico and the US proceeded rapidly after World War II—indeed, preceded the war. From data on trade shares, it is evident that NAFTA was fully formed as an ICRE by the 1960s, thirty years before the NAFTA agreement was signed. As with the EU, agreements followed the economic trends, not led them.[11]

In East Asia, rapid growth by a group of high performing East Asian economies (Hong Kong, Indonesia, Japan, Malaysia, the Republic of Korea, Singapore, Taiwan, and Thailand) started in the mid-1960s and was described as the Asian Miracle. In the 1980s, with the addition of Australia and New Zealand (after the UK joined the EU) and China (with its new policy of reform and opening to trade), and others, the region evolved into an E&SE Asia ICRE. As with the EU and NAFTA, integration was driven by economic trends, preceding the development of formal regional trade agreements by decades.

Today, E&SE Asia has an aggregate GDP equal to that of the US and Europe, and accounts for a much higher share of global trade than the US (Table 1). In terms of global trade, Europe is the largest player (37% of global exports), followed by E&SE Asia (28%), and then NAFTA, a far third (14%). Countries in "rest of world" have diversified trade patterns, are not integrated into an ICRE, and account for 22% of global exports.[12]

Table 2 shows the export shares by major member countries to the ICREs. For each ICRE, the within-region trade share is larger than the share of trade between the ICRE and any other region. Within NAFTA, Canada and Mexico have very high within-region export shares, exporting much less to other regions. For NAFTA, the US is the major platform for exports outside the region, drawing heavily on imported inputs from Mexico and Canada.

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[10] Finding ICREs using data on bilateral trade flows involves searching for high trade-share "clusters" in large country-by-country trade matrices. Technically, it involves a mathematical procedure (integer programming) to define and determine "membership" in clusters in large trade matrices.

[11] See chapter 2 in *The Global Economic Prospects*, World Bank (2005) for description of the emergence of ICREs.

[12] Netting out intra-regional trade in the three ICREs, which would correct for the fact that ignoring trade between US states understates the importance of the US compared to the other two ICREs, the US accounts for only about 15% of global inter-regional trade, close to its share of global trade (14%, Table 1).

NAFTA exports outside its region are split fairly evenly across destinations, while EU exports to NAFTA are a smaller share of its total exports than is the share of US exports going to Europe. The implication is that NAFTA and the US are more dependent on the European market than is Europe on the US market.

E&SE Asia also divides it exports out of its region evenly across the other regions. Within E&SE Asia, all member countries have higher export shares within the region than to any other region—all but China have within-region trade shares over 50%. The US is a major destination, but only accounts for 19% of E&SE Asia exports.

Tables 3 and 4 present data on global production and export shares for manufacturing. The NAFTA share of global aggregate manufacturing output is 18% (Table 3), which is significantly lower than the totals for E&SE Asia (41%), and Europe (26%). The US ranks third in shares of global production for all manufacturing subsectors, while E&SE ranks first, with subsector shares around double that of the US. In manufacturing trade, Mexico and Canada are tightly linked to the US, with very high export shares within NAFTA (Table 4). The US is clearly the export platform for NAFTA, with diversified exports across the globe. The countries of E&SE Asia export the most within the E&SE Asia region and also have diversified exports to other regions. Europe, on the other hand, exports largely within its region and has relatively small export shares to other regions.

The conclusion from a look at global trade patterns and the emergence of ICREs is that the US is no longer a hegemon in the world economy. It is a large economy, and a significant market, but it is not in a position to dictate to the rest of the world about the operation of the global trading economy. While it would not be easy, and sectors deeply involved in US trade will have a difficult adjustment, it would be feasible for the world to divert trade around the US if it moves to a high import protection industrial policy. Europe, in particular, trades mostly within its region, and should be relatively insulated from the global impact of changes in trade policy by the US.

Scenarios of US Trade Withdrawal in the Long Run

We explore the impact of a long run US policy of increased import protection under four different scenarios of reaction by the rest of the world. In all these scenarios, we assume that the US shift to an inward-looking, protectionist, policy regime is successful. All countries return to full employment and full capacity utilization in the long run (around 10 years), adjusting to the new policy environment. US industry successfully produces substitutes for imported intermediates and final goods.[13] We also assume no changes in the balance of trade of all countries, which must sum to zero across the globe. Trade balances are determined by macro forces, largely operating in asset markets, while we focus on trade in commodities and non-factor services. The scenarios are described in Table 5.

In all scenarios, US tariffs on all imports are increased by 30 percentage points. In the first simulation, no trade partner changes tariffs in response to the US action—they adjust to the US policy. In the second, all trade partners reciprocate against the US, matching the US tariff

[13] These long-run scenarios are optimistic in that they do not consider short-run adjustment problems. For a short-to-medium term analysis of trade war scenarios, see Zandi et al. (2018) and Zandi (2018).

increases, but do not change tariffs against non-US countries. This scenario is a full trade war between the US and its trade partners. In the third, only major trade partners of the US reciprocate: Canada, Mexico, Europe, China, Japan, South Korea, and the other high-income E&SE Asian economies. This scenario is a limited trade war. In the fourth simulation, there is a limited trade war as in the third simulation and, in addition, all non-US economies eliminate all tariffs among themselves—non-US trade liberalization.

Macroeconomic results

Table 6 provides scenario macro results for countries, including some regional aggregates, included in the global model. As expected, given the assumption of long-run adjustment with full employment of resources, there is very little change in GDP across the scenarios. The US loses in all scenarios, with similar small loses to its NAFTA partners, Canada and Mexico. With few exceptions, other countries have negligible changes or small losses in GDP. The only exception is that South Korea gains (+0.19%) in GDP in the global trade war scenario. If, as is likely, the structural adjustments that would accompany a trade war lead to losses in productivity, GDP would decline further. There are essentially no winners in trade wars in terms of GDP.

Changes in tariffs and trade, however, do lead to significant changes in world prices, which affect the international terms of trade (world prices of exports relative to world prices of imports) facing different economies. In scenario one (US Tariffs, with no retaliation), the US achieves a significant (5%) gain in the prices of its exports relative to the prices of its imports. In international trade theory, this is the "optimal tariff" argument that countries with market power can gain through restricting imports, if there is no retaliation. The net effect is to require less exports to achieve the same level of imports, so aggregate final demand in the US increases, more than offsetting the decline in US GDP. The net effect is small, only a 0.6% increase in total final demand. In all the other scenarios, with retaliation by trade partners, the terms-of-trade effect is reversed, and the US loses significantly. The US share in global trade is much smaller than its major partners, it does not dominate world markets, and in a trade war it loses. Aggregate final demand in the US falls by 1.3 to 2.4 percent in the three scenarios with retaliation.

For US trade partners, their terms of trade improve significantly as the US loses (except for a few countries that have little trade with the US and see small losses). This is particularly true for Canada and Mexico who have high trade shares with the US. These countries with improved terms of trade do gain, in terms of aggregate final demand, from the withdrawal of the US from global trade in a trade war.

Changes in tariffs do reverberate across national and global goods markets, affecting real exports and imports in all countries. As desired, increased US protection reduces US imports, and also reduces US exports. In the first, non-retaliation, scenario we get the paradoxical result that US exports fall more than imports. This result is due to the terms of trade improvement—the US can maintain imports with fewer exports. In all the other scenarios, with retaliation, US imports fall much more than exports, but both fall in all scenarios. Increased import protection inevitably leads to reduced exports in the long run, and US withdrawal from global trade.

When there is a global trade war and all regions retaliate against the US, real exports decline in all regions (with the exception of Africa which experiences a slight increase of 0.02%). US imports decline dramatically (16.47%), Canada and Mexico also experience import declines of 0.85% and 1.95% respectively. Aggregate imports in most other regions increase slightly, suggesting there is trade diversion away from the US.

Bilateral exports and trade diversion

When the US unilaterally increases tariffs, bilateral exports from the NAFTA region decline – both within NAFTA and to all other ICRE regions, with a total decline of 6.72%. (see Table 7). All other ICRE regions (Europe, E&SE Asia, and Rest of World) expand exports slightly, despite a decline in exports to NAFTA as exports to Europe and E&SE Asia expand. Global trade declines slightly, by 0.68%.

When there is a global trade war, total exports from all regions decline, with the biggest decline for the NAFTA region, at 7.78%. Global trade declines 2.04%. Exports to the NAFTA region decline substantially by all regions, ranging from -10.35% for NAFTA trade with NAFTA to -14.61% for Rest of World exports to NAFTA. All regions other than NAFTA expand trade with other ICRE regions – there is trade diversion around NAFTA. Furthermore, total exports from ICRE regions other than NAFTA do not decline substantially – for E&SE Asia, the decline is 1.64%, for Europe and the Rest of the World regions, the decline is less than one percent. This suggests that trade diversion around the US will not damage total exports for other regions. It is relatively easy to divert trade away from NAFTA markets.

When there is a limited trade war, the NAFTA region diverts some of its exports to the Rest of the World, the regions which do not engage in the trade war. However, NAFTA exports to all other regions decline further, compared to the global trade war, and NAFTA total exports decline more, at 8.56%. When there is a limited trade war and non-US regions remove tariffs among themselves, global trade declines slightly more than one percent. The NAFTA region diverts trade to the Rest of the World region, which does not raise its tariffs on the US. However, the other regions divert trade from NAFTA to Europe and E&SE Asia. Overall exports by ICRE regions decline less than in the case of a limited trade war. When other countries continue to embrace free trade, in contrast to the US position, it is relatively easy to divert around the US. Total exports decline by less than 0.5% for Europe and E&SE Asia while exports from the Rest of World region expand.

Consider the bilateral export changes by country when there is a limited trade war and other regions pursue free trade. Those countries closely linked to the US decline, despite expanding exports to other regions. Total exports from Canada and Mexico decline 5.43% and 4.55% respectively, despite substantial changes in exports to Europe and E&SE Asia (see Table 8). All regions divert trade away from NAFTA and towards Europe and E&SE Asia. For many regions, total exports increase.

Production changes in the US

The impact of US import tariffs and responses by trade partners on the sectoral structure of production is complicated. In the US, the manufacturing sectors are linked in a network of intermediate input flows including both domestic production and imports, and also are important exporters. Attempts to protect domestic manufacturing through increasing import tariffs is problematic, given this complex web of indirect and direct linkages across sectors. There is also a "fallacy of composition" at work. Imposing a tariff on imports of a single commodity should protect the domestic industry producing that commodity. Imposing tariffs on many commodities generates a complex mix of direct and indirect effects, leading to general damage to the traded goods sectors in the economy, both import substitutes and exports. Essentially, all of US manufacturing is dependent, directly and/or indirectly, on international trade, and is hurt by a policy of wide-spread import protection.

Table XX presents the changes in US real sectoral production of goods and services for three scenarios: US tariffs, global trade war, and limited trade war plus non-US FTA. The results indicate the strength of indirect effects and the failure of across-the-board tariffs to benefit protected sectors. The net effect of a policy of broad-based tariff protection is to damage US manufacturing and agriculture. The only gainer is the large "business services" sector, which includes most non-traded services. The policy leads to "deindustrialization" of the US—exactly the opposite of what was intended.

We also ran an additional simulation, a variant of the limited trade war scenario in which the US imposes tariffs only on manufactured imports. The effect is very similar to the scenario with broad-based import tariffs, except that the agriculture and processed food sectors gain instead of losing. All other manufacturing sectors lose. Agriculture and processed food sectors gain because it is assumed that trade partners reciprocate and only raise tariffs on manufacturing goods.[14]

Conclusion

In this analysis, we simulate possible responses to a US policy of disengagement from the global economy. We represent US protectionist leanings as a 30 percentage point increase in all tariffs. Other countries then have two options – retaliate and also protect their markets or continue to pursue free trade agreements without the US. Our analysis considers the changes in GDP, welfare, bilateral trade flows, and US production in different response scenarios.

We find that trade wars and industrial policy based on high levels of protection against imports are not good ideas. When the US pursues such policies, the world can divert its trade around the US at a modest cost. If no region retaliates, there are terms of trade gains for the US, but these gains are offset when other regions respond in kind with a trade war or liberalize trade among themselves. Furthermore, when the US protects, either broadly or just in manufacturing, its currency appreciates, hurting export sectors.

[14] It is possible for partners to retaliate by raising tariffs in sectors different from the sectors the US protects. For example, in the current US trade war with China, China has retaliated against US tariffs on steel and aluminum by imposing tariffs on agricultural products such as soybeans.

Broad protection in the US does not achieve its stated goal of expanding production in the protected sectors. There is a fallacy of composition; once you take into account the direct and indirect effects, even a limited trade war fails to protect manufacturing sectors and output in those sectors decline. Rather than promote manufacturing, protection leads to deindustrialization as the service sector expands.

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Table 1: Bilateral Regional (ICRE) trade as a share of global trade

	NAFTA	Europe	E&SE Asia	RoW	Total exports	Share of global GDP	Share of global population
NAFTA	5.2	3.1	3.0	2.5	13.8	26.0	6.7
Europe	3.5	23.5	3.8	6.0	36.8	26.3	7.5
E&SE Asia	5.3	4.9	12.9	4.8	27.9	26.6	31.9
RoW	3.3	6.4	5.7	6.0	21.5	21.1	53.9
Total imports	17.3	38.0	25.5	19.3	100.0	100.0	100.0

Entries are real export shares of total global trade from rows to columns. Table sums to 100. Source: GTAP 9 data base.

Table 2: Export shares by countries to Regions (ICREs)

	NAFTA	**Europe**	**E&SE Asia**	**RoW**	**Total**
NAFTA	**37.5**	**22.6**	**21.8**	**18.2**	**100.0**
United States	22.8	27.8	27.0	22.4	100.0
Canada	65.6	13.7	13.0	7.7	100.0
Mexico	77.1	7.3	5.8	9.8	100.0
Europe	**9.5**	**63.9**	**10.4**	**16.3**	**100.0**
E&SE Asia	**19.0**	**17.7**	**46.2**	**17.1**	**100.0**
China & HK	25.1	22.5	30.4	21.9	100.0
Japan	19.1	14.7	53.7	12.6	100.0
South Korea	14.9	13.1	50.6	21.4	100.0
Other high Asia	12.3	13.7	63.5	10.5	100.0
Low-income Asia	14.6	17.1	53.3	15.0	100.0
RoW	**15.6**	**29.7**	**26.7**	**28.0**	**100.0**
Central America	40.6	21.5	10.9	27.1	100.0
Latin America	21.6	20.2	25.6	32.6	100.0
India	18.9	25.3	22.1	33.6	100.0
Africa	23.0	27.1	25.0	25.0	100.0
Russia	6.9	50.3	17.4	25.4	100.0
MENA	12.1	24.8	35.8	27.4	100.0
Other countries	18.9	40.7	17.4	23.0	100.0

Source: GTAP 9 data base. Cells are export shares in percent from rows to columns. Rows sum to 100.
MENA: Middle East and North Africa

Table 3: Manufacturing Production Shares by Region (ICRE)

	NAFTA	E&SE Asia	Europe	All Other	Total World
Food, bev & tobacco	15.8	31.8	26.2	26.3	100.0
Textile-wood-paper	20.5	35.6	25.9	18.1	100.0
Iron-steel	10.5	57.1	15.9	16.5	100.0
Aluminum	16.3	43.4	21.2	19.1	100.0
Other intermediate	17.5	40.3	26.7	15.4	100.0
Motor vehicle & parts	21.4	37.6	30.1	11.0	100.0
Other Manufacturing	18.7	45.5	25.6	10.2	100.0
Total Manufacturing	**17.9**	**40.9**	**25.7**	**15.5**	**100.0**

Table 4: Total Manufacturing Export Shares by Country to Region (ICRE)

	NAFTA	E&SE Asia	Europe	All Other	Total World
USA	27.7	28.2	23.5	20.5	100.0
Canada	71.4	9.7	13.1	5.7	100.0
Mexico	79.4	4.0	6.3	10.3	100.0
China & HK	26.8	28.6	21.9	22.7	100.0
Japan	19.5	56.1	12.8	11.6	100.0
Korea	15.0	50.4	12.2	22.5	100.0
Other High Asia	14.9	63.6	12.7	8.8	100.0
Low Income Asia	17.1	52.3	14.8	15.7	100.0
Europe	8.9	10.4	64.6	16.2	100.0
Central America	49.1	8.2	9.7	33.1	100.0
Latin America	19.5	18.8	20.0	41.6	100.0
India	19.2	17.1	22.7	41.0	100.0
Middle E & N Africa	10.8	12.3	33.6	43.4	100.0
Africa	11.8	18.5	33.5	36.1	100.0
Russia	6.9	16.2	32.5	44.4	100.0
Rest of World	21.1	11.1	46.3	21.4	100.0
NAFTA	43.1	21.3	19.1	16.5	100.0
E&SE Asia	21.0	44.5	16.8	17.6	100.0
Europe	8.9	10.4	64.6	16.2	100.0
All Other	16.1	15.3	28.2	40.5	100.0

Table 5: Scenario Simulations, US Import Protection and Global Responses

Simulation	Description	Code changes	Comments
Sim 1	US protects	US increases all tariffs by 30 percentage points. No one reciprocates.	The world's response is "sit out" the trade war.
Sim 2	Trade war	US increases all tariffs by 30 percentage points. All trade partners reciprocate against the US, but do not change tariffs against each other.	Worst case: a full trade war against the US
Sim 3	Limited trade war (LTW)	US increases all tariffs by 30 percentage points. Only major trade partners reciprocate against US. No change in tariffs among non-US trade partners.	Developing countries (i.e. not the major trade partners) "sit out" the trade war.
Sim 4	LTW and non-US FTA	Sim 3, plus all regions except US eliminate tariffs among themselves	Limited trade war with US and all regions to continue liberalizing trade among themselves.

Table 6: Scenario simulations, percent changes in real macro aggregates and international terms of trade

Scenarios	US Protects	Trade War	Limited Trade War (LTW)	LTW & non-US FTA
United States				
GDP	-0.14	-0.63	-0.47	-0.51
Export	-10.64	-7.98	-8.93	-8.68
Import	-3.04	-16.47	-11.92	-13.13
Final demand	0.60	-2.38	-1.30	-1.58
Terms of trade	5.02	-17.41	-10.61	-12.40
Canada				
GDP	-0.19	-0.21	-0.34	-0.26
Export	1.66	-7.19	-5.39	-5.28
Import	-2.55	-0.85	-2.98	-1.88
Final demand	-1.31	1.53	0.40	0.68
Terms of trade	-4.20	7.58	4.33	5.20
Mexico				
GDP	-0.13	-0.11	-0.22	-0.13
Export	2.72	-7.48	-5.21	-4.45
Import	-2.36	-1.95	-3.74	-2.79
Final demand	-1.65	1.66	0.36	0.44
Terms of trade	-4.91	7.54	3.89	4.26
EU				
GDP	0.03	0.04	0.01	0.05
Export	0.04	-0.94	-0.66	-0.53
Import	0.02	0.41	0.13	0.36
Final demand	0.03	0.59	0.37	0.44
Terms of trade	-0.05	1.46	1.14	1.19
China & HK				
GDP	-0.01	-0.07	-0.08	-0.07
Export	0.34	-0.84	-0.43	-0.38
Import	-0.28	-0.17	-0.47	1.26
Final demand	-0.17	0.20	0.00	0.43
Terms of trade	-0.16	0.77	0.59	1.86
Japan				
GDP	0.03	0.06	0.04	0.08
Export	-0.19	-2.38	-1.88	-2.20
Import	0.02	0.64	0.23	1.38
Final demand	0.07	0.55	0.40	0.68
Terms of trade	0.16	3.27	2.73	4.22

Table 6: Scenario simulations, percent changes in real macro aggregates and international terms of trade

Scenarios	US Protects	Trade War	Limited Trade War (LTW)	LTW & non-US FTA
South Korea				
GDP	-0.01	0.19	0.06	1.09
Export	0.05	-2.59	-1.80	0.40
Import	0.07	0.56	0.09	3.04
Final demand	0.04	1.79	1.09	2.12
Terms of trade	0.14	3.20	2.40	3.19
Other High-income Asia				
GDP	-0.06	0.06	-0.03	0.02
Export	0.88	-2.17	-1.15	-1.27
Import	-0.23	0.28	-0.24	0.67
Final demand	-0.57	1.23	0.47	0.96
Terms of trade	-0.73	2.61	1.67	2.31
Low income Asia				
GDP	-0.02	-0.04	-0.03	0.01
Export	0.23	-0.85	0.04	1.66
Import	-0.16	-0.06	0.54	1.78
Final demand	-0.19	0.36	0.26	0.11
Terms of trade	-0.39	0.88	0.40	-0.15
Central America				
GDP	-0.11	0.00	-0.01	0.12
Export	0.07	-3.79	-0.81	0.62
Import	-1.06	0.31	1.03	2.53
Final demand	-0.57	1.53	0.83	1.03
Terms of trade	-1.86	4.18	1.08	1.30
Latin America				
GDP	-0.06	-0.02	-0.02	0.01
Export	0.77	-1.70	-0.07	1.06
Import	-1.01	0.41	0.55	1.58
Final demand	-0.33	0.34	0.10	0.08
Terms of trade	-1.50	2.43	0.56	0.04
India				
GDP	0.06	-0.01	0.01	0.25
Export	-0.74	-0.34	-0.36	1.65
Import	0.70	0.12	0.55	2.42
Final demand	0.37	0.09	0.24	0.44
Terms of trade	0.32	0.82	0.44	0.60

Table 6: Scenario simulations, percent changes in real macro aggregates and international terms of trade

Scenarios	US Protects	Trade War	Limited Trade War (LTW)	LTW & non-US FTA
Africa				
GDP	-0.05	-0.03	-0.05	0.00
Export	0.76	0.02	0.71	2.74
Import	-1.02	-0.52	-0.33	0.92
Final demand	-0.60	-0.18	-0.33	-0.56
Terms of trade	-1.77	-0.45	-1.14	-2.15
Russia				
GDP	-0.04	-0.04	-0.05	0.02
Export	0.98	-0.34	0.46	1.38
Import	-1.05	0.12	-0.29	0.10
Final demand	-0.65	0.14	-0.24	-0.38
Terms of trade	-1.01	0.16	-0.55	-1.38
MENA				
GDP	-0.06	-0.02	-0.07	0.02
Export	0.84	-0.53	0.32	1.20
Import	-1.33	0.06	-0.25	0.45
Final demand	-0.90	0.25	-0.25	-0.36
Terms of trade	-1.40	0.56	-0.38	-0.97
Other countries				
GDP	0.03	-0.06	-0.05	0.04
Export	-1.03	-0.37	-0.36	3.44
Import	0.33	-0.71	0.07	1.25
Final demand	0.31	-0.18	0.09	-0.26
Terms of trade	-0.20	0.01	-0.08	-1.54
Total				
GDP	-0.04	-0.14	-0.12	-0.08
Export	-0.68	-2.04	-1.60	-1.14
Import	-0.68	-2.04	-1.60	-1.14

Table 7: Percent changes in real bilateral exports by ICRE regions (row region exports to column region)

US Protects					
	NAFTA	**Europe**	**E & SE Asia**	**Rest of World**	**Total**
NAFTA	-3.15	-8.62	-8.83	-9.23	-6.72
Europe	-2.79	0.49	0.71	-0.37	0.06
E & SE Asia	-2.32	1.30	0.99	0.38	0.31
Rest of World	-3.59	1.57	1.35	1.27	0.63
Total	-2.91	0.03	-0.13	-0.83	-0.68
Global trade war					
	NAFTA	**Europe**	**E & SE Asia**	**Rest of World**	**Total**
NAFTA	-10.35	-5.95	-6.05	-6.86	-7.78
Europe	-14.10	0.49	0.80	0.10	-0.92
E & SE Asia	-13.82	2.16	0.84	1.26	-1.64
Rest of World	-14.61	1.90	1.47	1.98	-0.76
Total	-12.99	0.41	0.16	0.07	-2.04
Limited trade war					
	NAFTA	**Europe**	**E & SE Asia**	**Rest of World**	**Total**
NAFTA	-12.61	-21.07	-13.77	21.10	-8.66
Europe	-8.82	1.43	1.75	-5.01	-0.55
E & SE Asia	-8.63	3.24	1.58	-3.17	-0.88
Rest of World	-8.79	3.66	2.66	-0.78	0.21
Total	-9.89	0.19	0.04	0.16	-1.60
Limited trade war and non-US FTA					
	NAFTA	**Europe**	**E & SE Asia**	**Rest of World**	**Total**
NAFTA	-12.13	-18.44	-12.69	17.22	-8.35
Europe	-9.65	0.70	5.88	-3.86	-0.49
E & SE Asia	-11.17	4.72	1.80	0.08	-0.44
Rest of World	-8.40	5.00	5.11	-0.65	1.36
Total	-10.62	0.37	1.45	0.86	-1.16

Table 8: Percent change in real exports by country (row) to ICRE (column) for Limited trade war and non-US FTA

	NAFTA	Europe	E&SE Asia	Rest of World	Total
United States	-16.45	-22.64	-16.19	20.55	-9.81
Canada	-10.84	4.75	7.97	-0.13	-5.43
Mexico	-6.86	7.55	10.91	-4.52	-4.55
Europe	-9.65	0.70	5.88	-3.86	-0.49
China and Hong Kong	-11.26	6.18	2.43	0.78	-0.53
Japan	-14.06	2.95	1.34	-5.38	-2.20
South_Korea	-9.14	1.28	3.38	0.99	0.73
Other High-income Asia	-11.82	1.59	0.54	-3.47	-1.26
Low-income Asia	-7.93	6.17	2.11	3.98	1.62
Central_America	-5.38	6.23	8.09	1.75	0.51
Latin_America	-5.84	7.08	7.52	-3.58	0.93
India	-9.67	7.30	5.70	0.89	1.58
Africa	-9.11	7.60	8.51	2.26	2.65
Russia	-9.76	3.49	3.99	-2.14	1.23
MENA	-10.33	4.16	3.78	0.10	1.16
Other countries	-5.61	7.77	5.84	1.16	3.39
Total	-10.62	0.37	1.45	0.86	-1.16

Table XX: Scenario results, percent changes in real output by sector			
	US tariffs	Global trade war	Limited trade war and non-US FTA
Textiles	-2.5	-5.1	-4.8
Wearing apparel	-1.1	-11.4	-8.8
Leather products	-3.7	-14.7	-12.7
Wood products	-0.7	-2.8	-2.4
Paper products, publishing	-0.6	0.3	0.0
Petroleum, coal products	-3.8	-8.9	-6.8
Mineral products nec	-1.6	-2.1	-2.1
Iron and steel (ferrous metals)	-4.3	-0.7	-1.7
Chemical, rubber, plastic products	-5.1	-3.2	-4.0
Metals nec	-8.2	-1.8	-4.7
Metal products	-2.6	-2.9	-2.9
Motor vehicles and parts	-4.3	-8.1	-7.6
Transport equipment nec	-5.9	-4.4	-5.3
Electronic equipment	-3.8	-2.5	-2.6
Machinery and equipment nec	-4.2	-2.6	-3.2
Manufactures nec	-4.1	-8.2	-7.3
Agriculture	-3.4	-2.7	-3.1
Mining and energy	-0.9	-0.4	-0.4
Processed food	-1.3	-2.8	-2.6
Business services	1.1	1.6	1.5
Other services	-0.2	-2.1	-1.5