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Impacts on Global Trade and Income of Current Trade Disputes

Caroline Freund, Michael Ferrantino, Maryla Maliszewska, Michele Ruta

Introduction

Global trade tensions have worsened and developing countries stand to see depressing investments as global uncertainty grows. On July 6, the United States implemented a first round of tariffs on $34 billion of imports from China, as part of $50 billion in announced tariffs; China retaliated with tariffs on an equivalent amount of imports from the United States. Both countries have announced the potential for additional tariffs. The new tariffs will depress bilateral trade, disrupt global supply chains, and increase demand for substitutes from other countries. Because both countries are large, there will also be terms of trade effects. The biggest effects of tariff escalation on developing countries are likely to come from depressed investment, as firms delay investments because of uncertainty over market access.

This note assesses the implications of tariffs between China and the United States on developing countries, using a Computable General Equilibrium (CGE) Model, under the following three scenarios:

- Scenario 1: 25% tariff surcharge on the $50 billion in bilateral trade by US and China;
- Scenario 2: 25% tariff surcharge on all products traded between the US and China;
- Scenario 3: 25% tariff on all products traded plus a decline in investor confidence, resulting in a 0.5 pp drop in investment to GDP.

The analysis shows that a US-China tariff escalation could reduce global exports by up to 3% ($674 billion) and global income by up to 1.7% ($1.4 trillion) with losses across all regions.

- **Impact on developing countries:** Third-party countries benefit from increased preference margins in the US and Chinese markets when the two trading partners impose tariff surcharges. But, when investor confidence is shaken, these gains are more than offset for all regions by negative income effects. In this scenario, income losses range between 0.9% for South Asia and 1.7% for Europe and Central Asia.

- **Impact on China and US:** The biggest declines in incomes are recorded by China and the US, up to 3.5% ($426 billion) and 1.6% ($313 billion), respectively. The sectors most affected include: agriculture, chemicals and transport equipment in the US; and electronic equipment, machinery and other manufacturing in China.

In the current uncertain global business environment, developing and developed countries need to act to retain investor confidence and avoid the disruption of trade flows and global supply chains. Developing and developed countries can improve the credibility of future policies by deepening their commitments in multilateral fora such as the WTO and regional trade agreements.

Background Information

On July 6, the United States imposed new tariff surcharges of 25% on $34 billion (818 tariff lines) of US imports from China. The legal grounds for proposing these tariffs, under Section 301 of the Trade Act of 1974, is as a response to Chinese failure to respect US intellectual property, and perceived unfairness of Chinese technology and innovation policy. Tariffs on an additional $16 billion of US imports from China are planned for a later date (284 lines, with the list under review subject to public comment).

On the same day, China imposed new tariff surcharges of 25% on $34 billion (545 tariff lines) of Chinese imports from the United States. The magnitude and timing of these tariffs is designed to parallel the US tariffs on Chinese imports. Additional tariffs on $16 billion of Chinese imports from the US, 114 items (presumably subject to change), are scheduled to follow US tariffs.

On June 18, President Trump directed United States Trade Representative to prepare a third list, valued at $200 billion in US imports, in retaliation for the Chinese retaliation against the original Section 301 tariffs. The composition of this list in terms of commodities is unknown. As a point of comparison, total US imports of goods and services from China in 2017 were valued at $544 billion, and total Chinese imports from the United States in 2017 were valued at $188 billion. Thus, the original $50 billion of imports targeted by US tariffs amount to less than 10% of all imports from China, while the original $50 billion of imports targeted by China's tariffs amount to more than 25% of China's imports from the United States.

The composition of the US tariffs on $50 billion of imports from China focuses on technology-intensive intermediate goods traded by multinational companies, including machinery, computers, transportation equipment, electrical equipment, and fabricated metal products. As the result of public input, USTR removed from the original list a number of consumer goods, such as televisions. In the list announced on July 10, consumer goods such as appliances, computers and furniture are more heavily targeted.

The composition of the announced Chinese tariffs on imports from the United States focuses on agricultural products, automobiles and seafood (on July 6) and chemicals, energy products and medical equipment (on the second list).

The Three Scenarios

The analysis of tariffs between China and the United States on developing and developed countries is based on a CGE Model called LINKAGE, under the following three scenarios (Figure 1):[1]

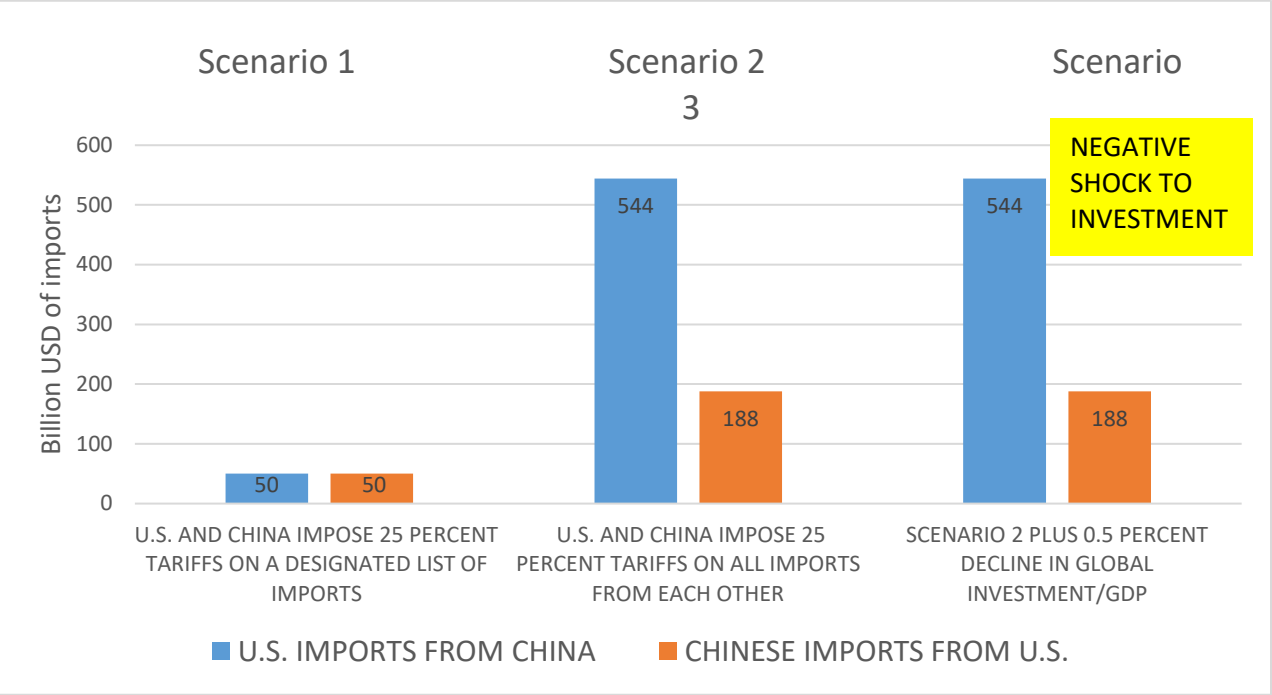
- Scenario 1: Implementation of the 25% tariff surcharge in line with the detailed product lists issued by China and the US on $50 billion in trade;
- Scenario 2: Implementation of the 25% tariff surcharge on all trade between the US and China (including ad valorem equivalent barriers on trade in services of 25%);[2] This scenario demonstrates effects from full tariff escalation.
- Scenario 3: Implementation of the 25% tariff surcharge on all trade between the US and China and a decline in investor confidence, resulting in a 0.5 pp drop in investment to GDP. This assumption is consistent with the decline of global investment as a share of GDP in 2001 recession and amounts to about a quarter of the global investment decline as a share of GDP during financial crises in 2008.[3]

[1] This analysis is conducted based on the application in Maliszewska, Olekseyuk, Osorio-Rodarte. 2018. *Economic and distributional impacts of comprehensive and progressive agreement for trans-pacific partnership: the case of Vietnam (English, Vietnamese)*. Washington, D.C.: World Bank Group.

[2] While services barriers are likely to take other forms than tariffs, such as investment or travel restrictions, a tariff equivalent of 25% is assumed.

[3] It is also slightly less than one standard deviation (0.64) in the series of investment to GDP since 1990.

Figure 1. Scenarios under investigation



Source: Comtrade and staff estimates (2017). 2017 US imports of goods at CIF amount to $526.1 billion (USITC), while imports of services amount to $17.4 billion (census.gov).

The analysis focuses on long-term effects and leaves out other policy factors that could alter the effects of the tariff escalation in developing and developed countries, particularly in the short term.

a. The analysis assumes perfect reallocation of exports and production in line with medium to long term elasticities. Due to short term rigidities and linkages through global value chains, as well as lower substitutability of import sources in the short run, the impacts on trade are likely to be more muted, with bigger losses for the US and China and smaller gains for the rest of the world.

b. The policy scenarios are limited to tariff changes between the US and China. Both countries could implement broader forms of economic or financial retaliation, as well as non-economic retaliation that could affect political stability. Finally, forms of managed trade that could replace tariffs would reduce the negative impact on both China and the US, but also create distortions for developing and developed countries that are not considered in this analysis.

c. Tariffs on other products or countries that are being implemented or are under consideration could have compounding effects, especially on investor confidence.

Effects on Trade and Income

1. **Global income declines by up to 1.7% ($1.4 trillion) with losses across all regions.** Global decline of income is expected to be relatively small from tariffs alone. It reaches 0.04% under Scenario 1, and 0.3% under Scenario 2 (Table 1). China and the US each lose about $30 billion in Scenario 1, while other regions are only

marginally affected.[4] Under Scenario 2, the decline of income is projected to be higher for China -2.5% ($302 billion), but also significant for the US -0.4% ($85 billion). In this scenario the trade diversion effect dominates the income effect and several countries benefit from increased preference margins in US and Chinese markets. In the medium/long term, third partners replace US exports on the Chinese market and vice versa, benefiting also from improved terms of trade. Scenarios 1 and 2 do not incorporate the impacts through investment and financial markets, which are likely to magnify the negative effects of tariff escalation on trade and income. With increased uncertainty from tariff escalation, global investment is likely to decline. Scenario 3 shows that in this case global income declines by 1.7% ($1.4 trillion) with losses across all regions.

2. **Global exports fall by up to 3% ($674 billion), with largest declines in China and the US**. Global decline of exports reaches 0.3% under Scenario 1 and 1.2% under Scenario 2 (Table 2). China and the US each lose about $40 billion in exports in Scenario 1, with global exports declining by $60 billion, as some of the other regions become more competitive on US and Chinese markets. Under Scenario 2, the decline of total exports from China and the US reaches $190 billion and $166 billion, respectively, with a significant decline of global exports of $276 billion. Finally, under Scenario 3, global exports would decline by 3% (similar in magnitude to the contraction in global exports in the 2001 financial crisis which followed the burst of the dot-com bubble) or about $674 billion.

3. **US imports from non-China East Asia, Mexico and Europe in part replace lower imports from China.** Under Scenario 1, US imports from China decline significantly in the sectors targeted by tariff surcharges and are replaced to some extent by imports from the EU and Mexico, especially in the case of electronic equipment and machinery and equipment (Figure 2). Under Scenario 2 imports from China decline across all sectors and are being replaced by imports from several other countries including in East Asia, such as Japan and Malaysia (electronic equipment), Vietnam (wearing apparel) and others (Figure 3). In Scenario 3, sectoral impacts are similar to Scenario 2, but the decline of imports is larger due to due to stronger income effects and higher price of capital in the US (Figure 4).

4. **Chinese imports from Latin America, Europe and Central Asia and other high-income countries partly offset declining imports from the US.** Under Scenario 1, Chinese imports from the US decline primarily in agricultural goods, chemicals and other manufacturing products. Exports from Europe, Australia, and Latin America replace US exports of agricultural goods (Figure 5). Under Scenario 2, the decline of imports from the US affects all sectors with the additional large decline in transport equipment (Figure 6). Note that imports from other East Asian countries are negatively affected, particularly for electronics and machinery and equipment, due to regional value chain linkages. Under Scenario 3, the impacts across sectors are similar to Scenario 2, but magnified (Figure 7).

5. **In the US, output of agriculture, chemicals and transport equipment contracts, while output of apparel and electronic equipment expands.** The announced retaliation by China affects mostly exports of US agricultural products, automobiles, seafood (List 1) and chemicals, energy products and medical equipment (List 2). As a result, exports and output of these sectors in the US decline with the biggest impact on agriculture (-2.7%), chemicals (-0.4%), other manufacturing goods (-0.8%) (Table 3). At the same time output of electronic equipment and machinery and equipment (1.2%) and output of metals (0.8%) expands to replace imports. Under

[4] Under Scenario 1, despite increases in the volume of exports in SAR and MENA, these regions face a terms of trade loss and negligible income decline.

Scenario 2 a larger decline would be expected in agriculture and transport equipment, with gains in electronic equipment, textiles and apparel. Under Scenario 3 most sectors shrink, including several services sectors, with largest losses for agriculture and transport equipment.

6. **In China, output of electronic equipment and other manufacturing sectors decline, while agricultural output expands.** The 25% tariff surcharge announced by the US affects mostly Chinese exports of machinery, computers, transportation equipment, electrical equipment, and fabricated metal products. The Chinese output of machinery and equipment and electronic equipment declines by 1.0% and 1.3%, respectively. Agriculture (1.0%) and other manufacturing goods (0.6%) benefit from output increases to replace imports. Under Scenario 2, the gains in output of agriculture and natural resources are magnified, including gains in transport equipment. However, several services sectors would be expected to decline along with some manufacturing sectors, such as, wearing apparel or machinery and equipment. Under Scenario 3, declines are magnified, while the expansion of natural resources and agriculture is muted.

Policy Implications

In this context, developing and developed countries need to act to retain investor confidence and avoid the disruption of trade flows and global supply chains. Suggested actions include:

- Use the WTO or the duly constituted dispute settlement bodies of regional trading arrangements to bring disputes regarding other countries' trading practices and to authorize reciprocation.
- Renew economic liberalization programs, reducing distortions, such as subsidies, and continue ongoing trade liberalization efforts through multilateral and regional fora.
- Continue to uphold the multilateral trading system and commitments in regional trade agreements to improve the credibility on the course of future policy.
- Avoid resorting to non-transparent forms of retaliation outside of the rules-based system, such as non-tariff measures.
- Minimize policy uncertainty by the timely and clear communication of future changes in trade policy.

About the author(s):

Caroline Freund, Director, World Bank's Macroeconomics, Trade & Investment Global Practice
cfreund@worldbank.org

Michael Ferrantino, Lead Economist, World Bank's Macroeconomics, Trade & Investment Global Practice
mferrantino@worldbank.org

Maryla Maliszewska, Senior Economist, World Bank's Macroeconomics, Trade & Investment Global Practice
mmaliszewska@worldbank.org

Michele Ruta, Lead Economist, World Bank's Macroeconomics, Trade & Investment Global Practice
mruta@worldbank.org

Appendix 1 – Figures and Tables

Table 1. Impact on income (million USD at 2017 prices).

	Lists 1 and 2 implemented on both sides		25pp increase tariff surcharge on bilateral US-CHN trade		25pp increase tariff surcharge on bilateral US-CHN trade and decline in investor's confidence	
	$million	%	$million	%	$million	%
USA	-29,414	-0.2	-84,501	-0.4	-312,789	-1.6
China	-33,123	-0.3	-301,919	-2.5	-425,749	-3.5
Mexico	2,766	0.2	16,467	1.4	-9,522	-0.8
Canada	1,731	0.1	10,637	0.6	-18,676	-1.1
EAP excl. China	2,954	0.1	12,769	0.3	-53,957	-1.3
SAR	-192	0.0	6,644	0.2	-27,181	-0.9
LAC	2,929	0.1	2,047	0.1	-32,778	-1.1
AFR	95	0.0	196	0.0	-6,409	-1.1
ECA	659	0.0	-6,933	0.0	-342,447	-1.7
MENA	-29	0.0	193	0.1	-2,752	-1.2
HICs	3,349	0.1	3,676	0.1	-106,978	-1.7
ROW	2,184	0.0	7,439	0.1	-95,649	-1.1
Global	-34,771	0.0	-266,344	-0.3	1,359,471	-1.7

Note: EAP: Brunei, Malaysia, Singapore, Vietnam, Thailand, Korea, Philippines, Indonesia, Cambodia and Laos; SAR: India, Bangladesh, Sri Lanka, Southeast Asia, LAC: Chile, Peru, Brazil, Colombia; AFR: South Africa, rest of SACU, Tanzania, Ethiopia and Kenya; ECA: EU28, Russia, Turkey; MENA: Egypt; HICs: Australia, New Zealand, Japan; ROW: rest of the World.
Source: WB staff estimates.

Table 2. Impact on total exports (million USD at 2017 prices and % deviations from the baseline).

	Lists 1 and 2 implemented on both sides		25pp increase tariff surcharge on bilateral US-CHN trade		25pp increase tariff surcharge on bilateral US-CHN trade and decline in investor's confidence	
	$million	%	$million	%	$million	%
USA	-38,480	-1.7	-166,622	-7.2	-207,796	-8.9
China	-40,495	-1.7	-190,092	-7.9	-238,224	-9.3
Mexico	2,953	0.7	14,197	3.3	332	0.1
Canada	1,858	0.4	8,396	1.6	-2,288	-0.4
EAP excl. China	4,037	0.2	23,649	1.0	-13,851	-0.6
SAR	204	0.0	3,684	0.7	-4,235	-0.8
LAC	1,361	0.3	2,513	0.6	-6,845	-1.6
AFR	123	0.1	454	0.3	-1,731	-1.2
ECA	4,880	0.1	12,751	0.1	-149,636	-1.7
MENA (Egypt)	19	0.0	160	0.4	-334	-0.9
HICs	2,152	0.2	6,993	0.6	-13,075	-1.2
ROW	3,313	0.1	14,548	0.4	-33,713	-1.0
Global	-59,486	-0.3	-275,661	-1.2	-673,699	-2.9

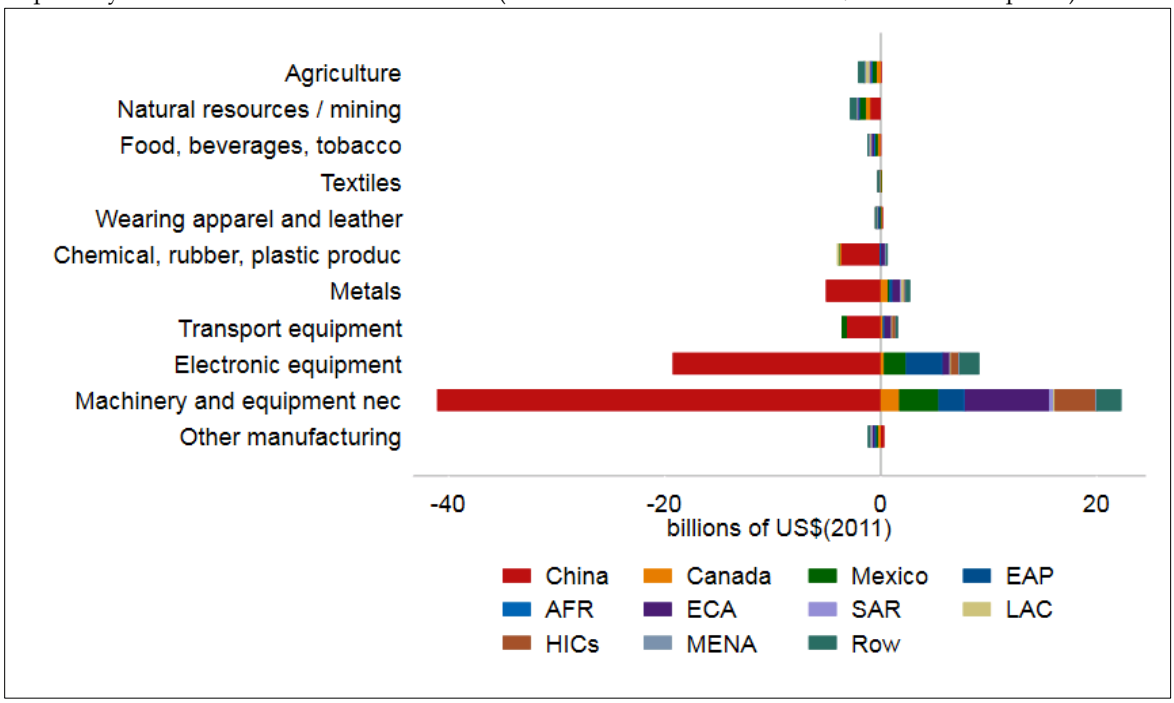
Note: EAP: Brunei, Malaysia, Singapore, Vietnam, Thailand, Korea, Philippines, Indonesia, Cambodia and Laos; SAR: India, Bangladesh, Sri Lanka, Southeast Asia, LAC: Chile, Peru, Brazil, Colombia; AFR: South Africa, rest of SACU, Tanzania, Ethiopia and Kenya; ECA: EU28, Russia, Turkey; MENA: Egypt; HICs: Australia, New Zealand, Japan; ROW: rest of the World.
Source: WB staff estimates.

Table 3. Output changes in the US and China (%age deviations from the baseline)

	USA			China		
	Sc. 1	Sc. 2	Sc. 3	Sc. 1	Sc. 2	Sc. 3
Agriculture	-2.7	-4.6	-5.9	1.0	2.2	2.0
Natural resources / mining	-0.3	-0.1	-2.7	0.3	2.2	2.0
Food, beverages, tobacco	-0.1	0.3	-0.8	0.2	0.5	0.3
Textiles	0.1	4.7	3.6	0.3	-0.4	-0.8
Wearing apparel and leather	0.1	8.0	7.5	0.3	-2.5	-2.8
Chemical, rubber, plastic products	-0.4	-0.3	-2.1	0.2	0.6	-0.4
Metals	0.8	-0.1	-1.4	-0.6	0.3	-1.2
Transport equipment	0.2	-1.9	-3.2	0.0	1.6	0.1
Electronic equipment	1.2	5.8	4.0	-1.0	-7.4	-8.8
Machinery and equipment nec	1.2	-0.5	-2.3	-1.3	-0.3	-2.1
Other manufacturing	-0.8	1.4	0.1	0.6	-1.9	-3.1
Utilities	0.0	0.0	-1.4	-0.1	0.0	-0.8
Construction	-0.1	-0.7	-2.8	-0.1	-1.4	-2.9
Trade and transport	0.0	0.0	-1.1	-0.1	-0.3	-1.0
Finance and other business services	0.0	0.1	-1.6	-0.1	-0.3	-0.8
Communication and business services nec	0.0	0.1	-1.0	-0.1	-0.6	-1.4
Social services	0.0	0.0	-0.4	0.0	-0.1	-0.2
Total	0.0	0.0	-1.2	-0.1	-0.3	-1.3

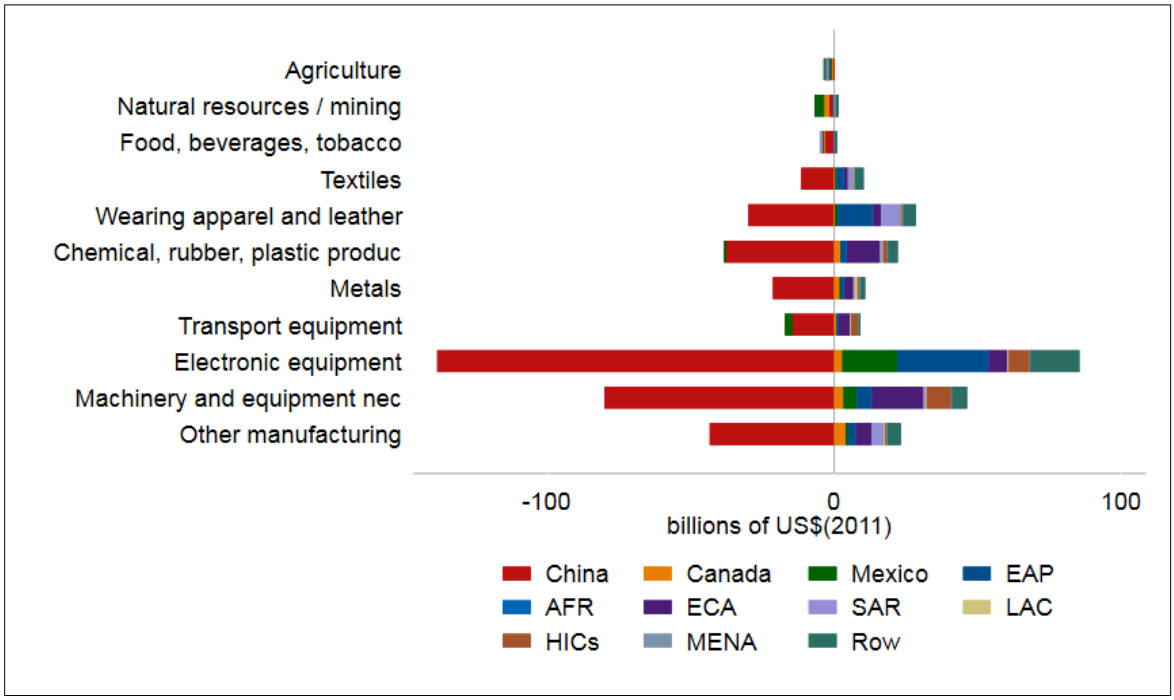
Source: WB staff estimates.

Figure 2. Imports by the United States under Scenario 1 (deviations from the baseline in $billion at 2011 prices).



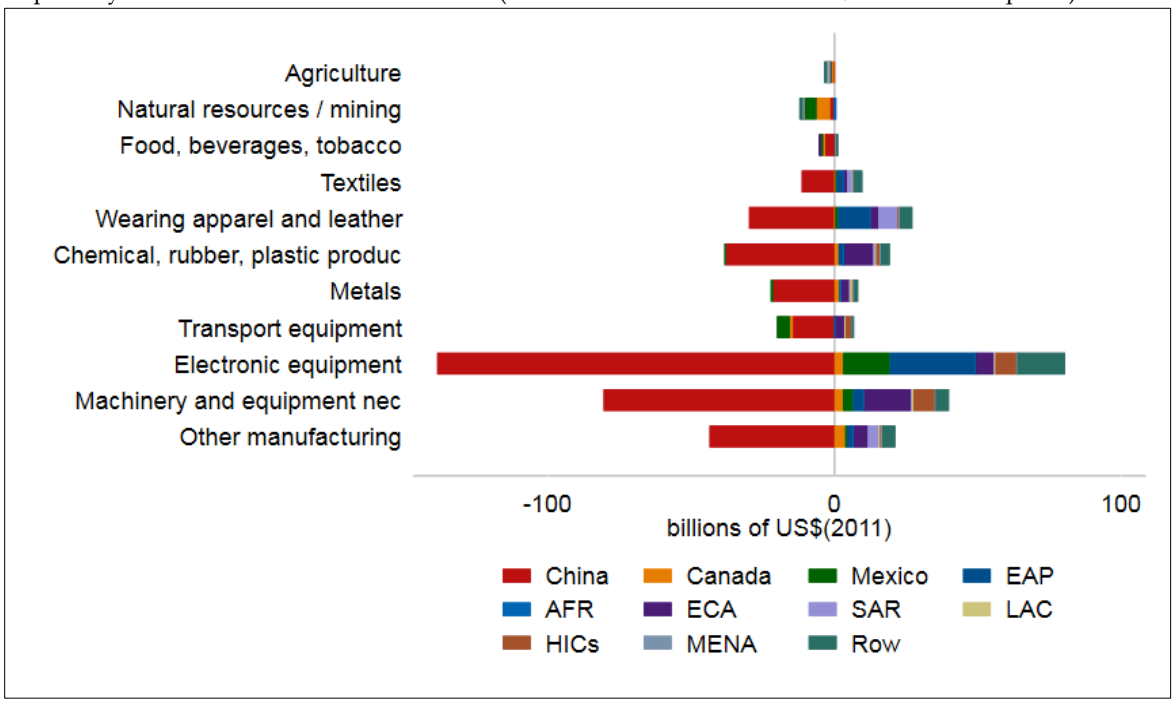
Source: WB staff estimates.

Figure 3. Imports by the United States under Scenario 2 (deviations from the baseline in $billion at 2011 prices).



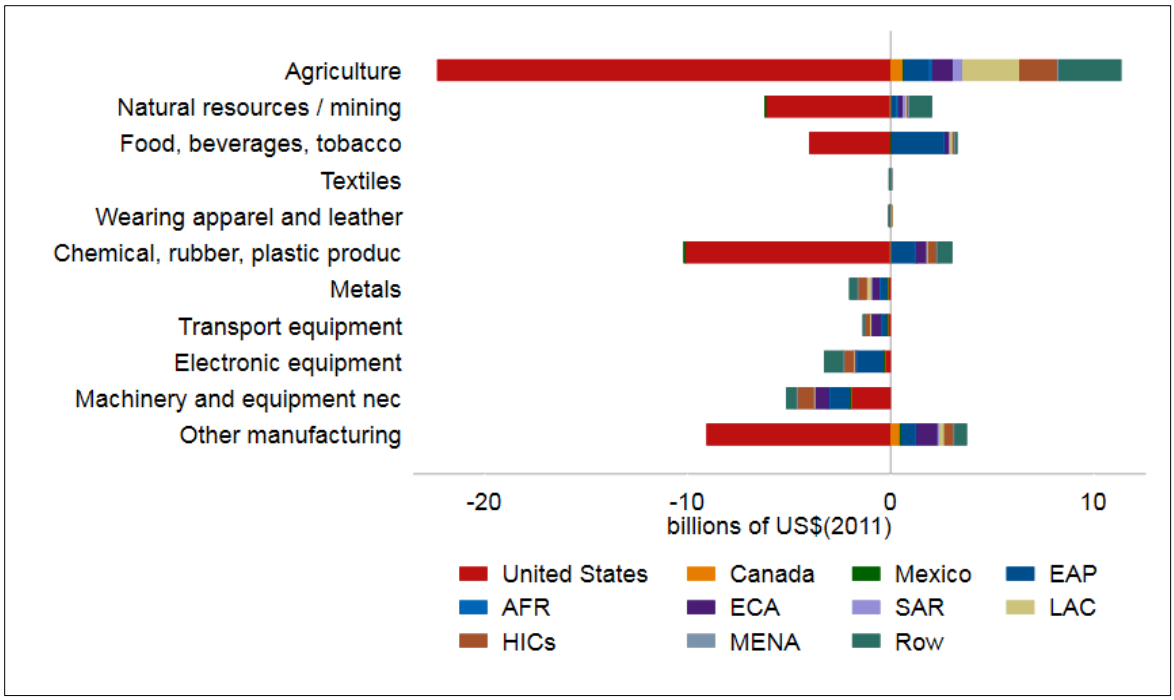
Source: WB staff estimates.

Figure 4. Imports by the United States under Scenario 3 (deviations from the baseline in $billion at 2011 prices).



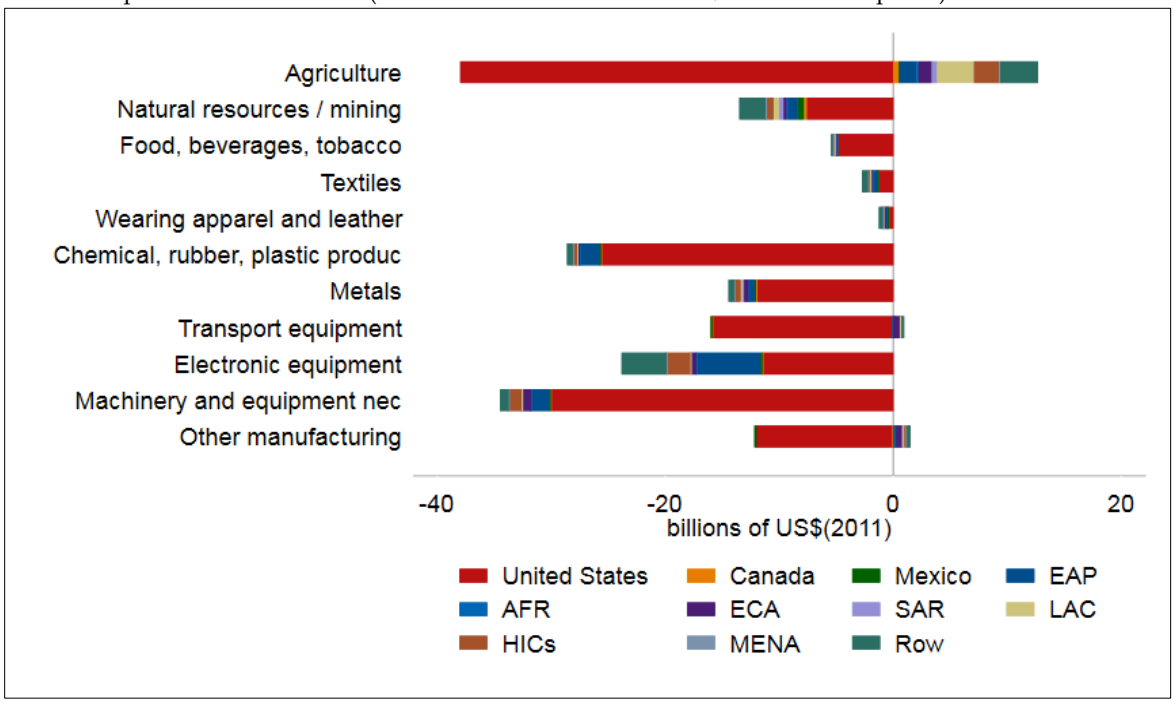
Source: WB staff estimates.

Figure 5. Chinese imports under Scenario 1 (deviations from the baseline in $billion at 2011 prices).



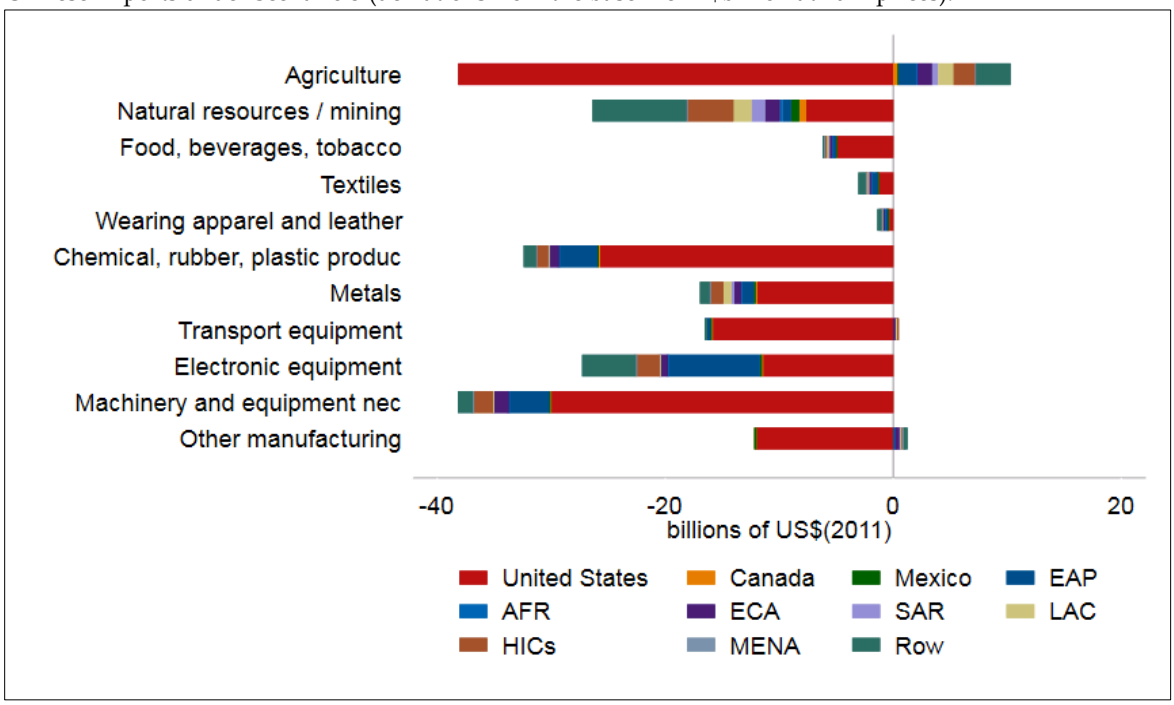
Source: WB staff estimates.

Figure 6. Chinese imports under Scenario 2 (deviations from the baseline in $billion at 2011 prices).



Source: WB staff estimates.

Figure 7. Chinese imports under Scenario 3 (deviations from the baseline in $billion at 2011 prices).



Source: WB staff estimates.