

## Trump 2.0 Tariffs: What Cost for the World Economy?

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### Summary

This *Policy Brief* conducts an *ex-ante* evaluation of Donald Trump's protectionist proposal, an increase by 10 percentage points of tariffs on all goods from all origins, except Canada and Mexico, combined with 60 percentage points of tariffs on all goods from China. US partners retaliate.

World GDP declines by 0.5%, with sharp contraction in the US (-1.3%) and China (-1.3%), limited negative impact in France and Germany, and significantly positive effects on Canada and Mexico.

Trade between the US and China becomes almost decoupled; US wages fall while Mexican wages rise.

Trade retaliation not only punishes the US, but also allows some countries to reduce their losses in terms of trade and economic activity.

Most US trading partners benefit from a more protectionist US trade policy against China.



## 1. Introduction

Tariffs are again central to the US presidential election debate in 2024. Donald Trump, who describes himself as a “Tariff Man”,<sup>1</sup> has made numerous protectionist proposals during his campaign. The aim of this *Policy Brief* is to assess the impact of the Republican Party candidate’s proposals on economic activity and world trade.

For Donald Trump, the objectives of these tariff hikes are numerous: reduce the US trade deficit, reindustrialize the US, replace taxes on tips and finance a 1% cut in corporate income tax with these revenues,<sup>2</sup> support national security, fund a childcare program,<sup>3</sup> and prevent countries from abandoning the US dollar.<sup>4</sup>

In addition to the multiplicity of objectives, from a practical point of view, Donald Trump has made various proposals concerning the level and geographical scope of these new tariffs: a 10% tariff on all products imported from every partner; a 20% similar tax;<sup>5</sup> a 60% tariff on all imports from China; implementing strict tariff reciprocity by product and by country;<sup>6</sup> a major tax reform, with US tariffs raised to a level sufficient to replace the federal income tax;<sup>7</sup> finally, a 100% tariff on imports from countries that stop using the dollar in their international transactions.

Are these statements credible? Given Donald Trump’s track record of imposing tariffs in 2018 and 2019 during his previous mandate, they are. However, these policies applied only to a specific group of products or partners, while his new proposals made in 2023 and 2024 are far broader, affecting all products from all countries. This raises the question of whether the president of the United States could himself decide on such a policy. Indeed, the US constitution explicitly grants Congress the authority to impose tariffs. If both the Trump and the Biden administrations have implemented tariffs, it was under a selective authorization given by trade laws: the well-known Section 201 (safeguard) tariffs, the Section 232 (national security) tariffs, and the Section 301 (unfair practices of trading partners) tariffs. Under these three sections of US law, the president can implement tariffs on a group of products from a number of countries, but never a general tariff. According to Alan Wolff,<sup>8</sup> he could do so in the event of a national

emergency (like a balance-of-payments crisis, for example<sup>9</sup>) or to punish countries practicing systematic trade discrimination against the United States. Both of these arguments are difficult to defend today, and Donald Trump may need control of both houses of Congress by the Republican Party to implement such a protectionist law.

Several studies have conducted ex-post and ex-ante assessments of the impact of recent or upcoming protectionist decisions by the US administrations;<sup>10</sup> they are presented in Box 1. Our contribution is to also provide an evaluation of the impact on the rest of the world and a richer counterfactual analysis (with five scenarios) that leads to several important policy conclusions.

We use the MIRAGE model of the world economy to simulate a central scenario where the US increases tariffs on all imports from all countries (+10 percentage points – pp) with a more severe increase on imports from China (+60 pp<sup>11</sup>). We assume that tariffs on Canada and Mexico, as members of the US-Mexico-Canada Agreement (USMCA)<sup>12</sup>, remain unchanged. In this scenario, all trade partners targeted by the US retaliate and apply the same increase in customs duties on US imports as the one imposed on their exports.

In this central scenario, overall world exports fall by 3.4% in volume<sup>13</sup> and world GDP declines by 0.5%. Economic activity contracts more sharply in the US (-1.3%) and China (-1.3%).

The impact on European countries (France, Germany, Rest of the European Union) is negative, but limited. In contrast, it is positive for Canada (+1.3%) and especially Mexico (+6.6%); this illustrates their privileged status under the USMCA. Two other important

implications of this trade war are: (i) trade between the US and China becomes almost decoupled; (ii) US wages fall while Canadian and, especially, Mexican wages rise.

We also simulate four alternative scenarios. They show that: (i) the details of the policies adopted are important in terms of their impact on economic activity and trade; (ii) trade retaliation not only punishes the US, but also allows some countries to reduce their losses in terms of trade and economic activity ;

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(1) Boucher and Thies (2019).

(2) York (2024).

(3) Balingit (2024).

(4) Lobosco (2024).

(5) Egan (2024). 2024. It is unclear from his statements whether this means a minimum tariff of 10% or 10 percentage points added to the tariffs already in place on all products from all countries.

(6) Riley (2023).

(7) York (2024).

(8) Wolff (2024).

(9) Richard Nixon applied this presidential power in 1971 to temporarily introduce an additional customs duty of 10 percentage points on all imports, using the argument of insufficient gold stocks of the Federal Reserve.

(10) An ex-post assessment is conducted after the adoption of the policy or shock and is based on observed data. An ex-ante assessment is conducted before the shock and is based on an economic model calibrated on data that reproduce the economy at the date of the implementation of the shock or the adoption of the policy.

(11) For example, a US 5% tariff on tomatoes coming from the EU is increased to 15%; if it comes from China, it is raised to 65%.

(12) The United States-Mexico-Canada Agreement, which replaced the North American Free Trade Agreement (NAFTA) in 2020.

(13) In this study we give the priority to results in volume rather than value, with one exception. From now on, in the body of the text, when no indication is provided, the result is in volume or real terms. The analysis in volume terms provides a more precise evaluation of the real impact of the shock.

## Box 1 – Review of literature

A number of ex-post studies have assessed the impact of the 2018-19 tariffs on the US economy: Autor *et al.* (2024) investigate the economic consequences on the US of the Trump administration's 2018-19 tariffs using detailed geographic-level data combining local exposure to domestic imports, US tariffs and retaliatory tariffs by trade partners, and US unemployment compensation programs. The 2018-19 tariffs showed no significant impact on employment in the sectors concerned, while retaliatory tariffs had a significantly negative impact, particularly in agriculture. Fajgelbaum *et al.* (2020) use detailed trade and unit value data to find that world prices for products targeted by the 2018-2019 tariffs did not fall, and that US tariffs and retaliatory tariffs by partners significantly reduced both US imports and exports. They estimated a loss in real national income of 0.04% of US GDP. Flaaen and Pierce (2019) employ a 'difference-in-difference' approach based on detailed US manufacturing and trade data to estimate the protective effect of Trump tariffs on import-substituting industries, alongside the de-protective effect on user industries, as well as the negative effects of retaliatory tariffs. They conclude that the effects of this 2018-19 trade war were negative overall for US manufacturing activity and employment. Amiti *et al.* (2020) focus on the pass-through from world prices to domestic

prices initiated by the 2018-19 tariffs in the US using 2019 unit-value trade data. Their study confirms that tariffs are generally borne by US households and businesses, with few exceptions such as the steel sector, where exporters absorbed around half of the shock. York (2024) conducts two ex-post evaluations, one on the 2018-2019 US tariffs, another on the retaliatory measures against the US, using the Tax Foundation's general equilibrium model. The tariffs implemented by the Trump administration, and maintained by that of Biden, reduced long-term US GDP by 0.2%. Retaliation had a very small negative effect on US GDP.

Another strand of the literature provides *ex-ante* assessments of Trump's proposals. York (2024) evaluates the implementation of a 10% universal tariff combined with a 60% tariff on imports from China, applied in 2024, using the Tax Foundation's general equilibrium model. GDP would fall by 0.8% following the implementation of the 10%–60% double tariff in 2025. Clausing and Lovely (2024) estimate the effects of a 10% universal US tariff, coupled with a 60% tariff on imports from China, based on an "equivalent variation" formula already applied by Fajgelbaum *et al.* (2020). They conclude that the total cost of this policy would be around 1.8% of US GDP.

(iii) most US trading partners benefit from a more protectionist US trade policy against China; (iv) if the countries active in this trade war also implement non-tariff measures, the impact on economic activity and trade is even more severe; (v) the US cannot entirely replace federal income tax with customs revenues.

## 2. A central scenario and four alternatives

We simulate five scenarios (see Table 1). In the central scenario (SCentral), US customs duties on all products from all countries, except Canada and Mexico, are increased by 10 pp, while the US increases tariffs on imports from China by 60 pp. All US trading partners retaliate: they raise tariffs on US goods by the same margin (10 pp or 60 pp in the case of China). Only Canada and Mexico do not change their trade policy. All these tariff changes take place in 2025.

In a second scenario, SMin10, the United States imposes a minimum tariff of 10% on all goods from all countries, except for Canada and Mexico. In this scenario, only tariffs below 10% are increased to meet the minimum threshold, while those above 10% remain unchanged.

In a third scenario, S+10, US customs duties on all products from all countries, except Canada and Mexico, are increased by 10 pp. Comparison between SMin10 and S+10 will show that "the devil is in the details".

The fourth scenario, S+10/60, builds on S+10, but with the US increasing tariffs on imports from China by 60 pp. Comparison between S+10 and S+10/60 will evaluate the impact of a "more anti-China" policy on other US trading partners. The comparison

with SCentral will also illustrate the impact of retaliations on the US and other countries.

Finally, scenario SNTM adds to scenario SCentral, on the one hand, an increase by the US in the ad valorem equivalent (AVE) of non-tariff measures (NTMs) of 25% on all products from all countries (except Canada and Mexico); on the other hand, US trading partners (except Canada and Mexico) also raise NTMs by 25% (also applied on their AVE) on imports from the US. Comparison between SCentral and SNTM will show that with non-tariff measures (NTMs) implemented, the impact of this trade war will be even more severe.

Table 1 – Five scenarios

CENTRAL SCENARIO (SCentral)	US customs duties on all products from all countries, except Canada and Mexico, are increased by 10 pp, while the US increases tariffs on imports from China by 60 pp. All US trading partners retaliate: they raise tariffs on US goods by the same margin (10 pp or 60 pp in the case of China).
SMin10	US imposes a minimum 10% import tariff on all goods from all countries except Mexico and Canada. When the current tariff is above 10%, it is unchanged.
S+10	US increases import tariffs by 10 pp on all goods from all partners, except Mexico and Canada.
S+10/60	S+10 – but US increases tariffs by 60 pp on goods from China.
SNTM	SCentral and US increases AVE of NTMs by 25% on all goods from all partners (except Canada and Mexico), and US trading partners increase AVE of NTMs on US imports by 25%.

Source: Authors' design.

Box 2 – Methodology

This *ex-ante* evaluation is based on the MIRAGE model of the world economy. We use the MIRAGE-Power model, a multi-regional, multi-sector dynamic computable general equilibrium (CGE) model devoted to trade policy analysis and more recently applied to long-term growth and environmental issues, developed by CEPII (CEPII MIRAGE team, 2024). MIRAGE-Power includes a detailed modelling of energy consumption and electricity generation. The model is calibrated with the GTAP-Power 11B database, using 2017 as the base year.

Macroeconomic projections, including GDP, labor participation rates, skill levels, current account targets, and investment/saving rates, are based on estimates from the MaGE growth model (Fontagné *et al.*, 2022). The baseline GDP growth rate until 2022 has been adjusted to reflect the impact of the Covid-19 pandemic. The baseline scenario incorporates major trade policies implemented between 2017 and 2022, supported by highly detailed data on tariff equivalents (MAcMAP-HS6 for 2022) and non-tariff measures in goods and services (Fontagné *et al.*, 2016; Guimbard *et al.*, 2012). Additionally, the baseline accounts for recent trade developments, such as the US-China tariff war, Brexit, the Comprehensive Economic and Trade Agreement (CETA), and sanctions on Russia, including tariffs and import bans. These sanctions are imposed in the form of customs duties or import bans by Australia, Canada, the United States, Japan, New Zealand, the United Kingdom and the European Union. Import bans are modelled by a 200% customs duty.

While this model gives a relatively solid quantitative evaluation of the impact of this policy and allows counterfactual analysis, its limitations are well-known: no adjustment costs, an external closure assumption where either the current account is unchanged as compared to the baseline or the real exchange rate is not modified, specific functional forms for supply and demand functions.

Table 5 in the appendix presents the average customs duty in each scenario imposed by the importing country on goods coming from the exporting country.<sup>14</sup>

Simulation of these scenarios are performed using the MIRAGE model, a computable general equilibrium model of trade. Our analysis focuses on 30 sectors and 20 countries/regions, including key US and Chinese trading partners.<sup>15</sup> While the MIRAGE model conducts a simulation of the world economy every year from 2025 to 2040, we provide results in 2030, just after the end of a new mandate for Donald Trump as US president. Box 2 provides more details on the model.

(14) Calculations of these averages are conducted at the detailed level (about 5,200 products) and at the bilateral level, i.e. partner-by-partner, before aggregation.

(15) These aggregations and their correspondence to the GTAP-Power 11B database may be requested from the authors.

### 3. The economic and trade impact of the central scenario

A trade war, as described by the central scenario, would have major economic implications for the US and the rest of the world.

As shown in Figure 1, world trade decreases by 3.4%. This significant decrease is accompanied by a decrease in world Gross Domestic Product (GDP) of 0.5%.

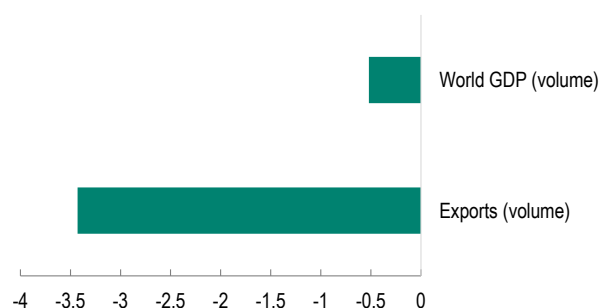
*this trade war is very costly for the US, with a 1.3% decrease in GDP*

Table 2 presents the impact of SCentral for all countries or regions in 2030. This trade war is very costly for the US, with a 1.3% decrease in GDP. US exports decrease by 22.9% and imports by 17.5%.<sup>16</sup>

As evaluated by the MIRAGE model, the US share in world imports is 13.6% in 2030 in the baseline. With this central scenario, a 17.5% reduction in US imports translates to a 2.4% drop in global trade (= 17.5%\*13.6%). However, imports of US trading partners also decrease (Canada and Mexico excepted) and general equilibrium effects amplify this fall.

*severe consequences for China, whose GDP falls by 1.3%*

Figure 1 – Impact of SCentral on world trade and world GDP in 2030, percentage change as compared to the baseline



Source: MIRAGE-Power, CEPII, and authors' calculation.

This trade war also has severe consequences for China, whose GDP falls by 1.3% and exports by 8.9%. Indeed, the United States is the leading destination for Chinese merchandise exports, accounting for 14.8% of its total exports (WTO, 2024). Wages for skilled and unskilled workers are falling significantly, as is the return on capital.

(16) In the long term, almost all the impacts are magnified, not only the global but also the national effects, and not only the positive but also the negative impacts. For illustration, the decrease of world trade is 3.4% in 2030, 3.6% in 2040; the decrease of US GDP is 1.3% in 2030, 1.7% in 2040; the increase in Mexican exports is 26.1% in 2030, 35.4% in 2040. This is explained by dynamic effects, e.g. less national income, less savings, less investment, less GDP growth. It is noteworthy that, with reduced trade and less economic activity, global GHG emissions decrease, especially emissions related to international freight.

This trade war is slightly costly for France and Germany, and significantly beneficial for Canada and especially Mexico. Mexico increases its exports by more than 26%, as it benefits from relatively improved access to its first export market (the US does not decrease customs duties on Mexican products but increases them on Mexican competitors) and an improvement in its terms of trade on the import side. Indeed, facing increased barriers on exports to the rest of the world, US producers

*China's exports to the US decrease by 80.5% while US exports to China fall by 58.0%*

decrease their export price toward Mexico and Canada. The gains in terms of GDP are substantial for Canada (1.3%) and large for Mexico (6.6%).

With respect to the productive factors' compensation, the impact on the return of capital is positive for Canada and Mexico and negative for all other countries and regions (Table 2). The negative impact on wages for both US

skilled and unskilled labor is an important policy conclusion, as Donald Trump has said he intends to develop a "worker-centered trade policy". Gains for Mexican workers are substantial.

What is the impact of this trade war on the geography of trade flows? Since 2021, the issue of the decoupling of the US and Chinese economies has been intensively discussed, with a decrease in bilateral trade between these two trading powers<sup>17</sup> and the issue of nearshoring high on the political agenda. Figure 2 presents the impact of this trade war on several important bilateral trade flows in value in 2030 (for more details, see Table 6 in the appendix).

With this trade war, the "Great Reallocation" is happening: China's exports to the US decrease by 80.5% while US exports to China fall by 58.0%. Even more strikingly, US exports to all destinations, except countries from the USMCA and the Rest of America region, decrease by at least 20%. However, US exports to Canada and Mexico increase by 4.0% and 16.8% respectively, and US imports from Canada and Mexico by 17.5% and 33.6%. This is clearly a significant reorientation of trade to close neighbors.

*this trade war could lead to a significant widening of bilateral trade deficits with China*

The impact of this trade war on exports from China to the US is very substantial and, since China's GDP is also negatively affected, Chinese imports from all sources decrease. With increasing Chinese exports and decreasing Chinese imports, this trade war could lead to a significant widening of bilateral trade deficits with China, with potentially new protectionist pressure in the EU and big countries such as Japan and the UK. For example, French exports to China decrease by 6.0% while French imports from China increase by 7.1%.

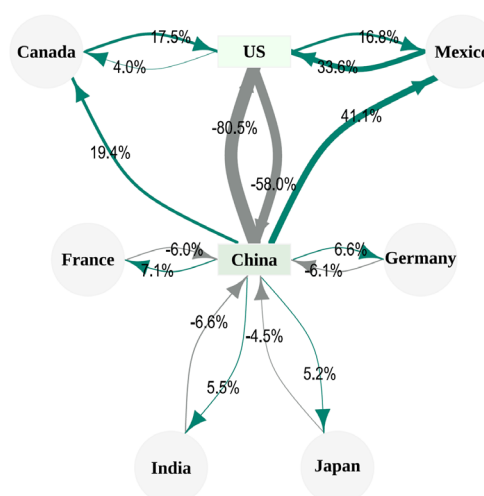
Table 2 – Impact of Scenario SCentral on GDP, exports, imports in volume, real return of capital, skilled and unskilled real wages by country/region in 2030, percentage change as compared to the baseline

Region	GDP	Exports	Imports	Return to capital	Skilled wages	Unskilled wages
ASEAN	0.2	0.4	0.3	-0.2	0.0	0.1
Australia and NZ	-0.1	-1.0	-0.8	-0.2	-0.1	-0.1
Brazil	-0.2	-2.3	-1.8	-0.2	-0.3	0.0
Canada	1.3	8.3	7.1	0.8	1.4	1.1
China	-1.3	-8.9	-9.4	-0.6	-1.6	-1.1
France	-0.1	-0.5	-0.7	-0.2	-0.2	-0.1
Germany	-0.1	-0.6	-0.7	-0.2	-0.1	-0.1
India	-0.3	-1.3	-1.2	-0.2	-0.2	-0.1
Japan	-0.2	-1.9	-2.1	-0.2	-0.3	-0.2
Korea	-0.3	-1.0	-1.2	-0.4	-0.4	-0.3
Mexico	6.6	26.1	23.4	1.4	4.7	5.1
MENA	-0.1	-0.5	-0.2	-0.1	-0.2	-0.1
Rest America	-0.2	-1.0	-0.9	-0.6	-0.5	-0.4
Rest Asia	-0.2	-0.9	-0.8	-0.3	-0.4	-0.2
Rest Europe	-0.1	-0.7	-0.4	-0.1	-0.1	-0.1
Rest EU 27	-0.1	-0.4	-0.5	-0.2	-0.2	-0.2
Rest of Latin America	-0.2	-2.9	-2.5	-0.2	-0.3	-0.3
Sub-Saharan Africa	-0.1	-0.8	-0.4	-0.1	-0.1	-0.1
UK	-0.3	-1.4	-1.0	-0.1	-0.3	-0.2
USA	-1.3	-22.9	-17.5	-0.4	-1.6	-0.9

Source: MIRAGE-Power, CEPII, and authors' calculation.

Note: ASEAN stands for Association of Southeast Asian Nations, NZ for New Zealand, MENA for Middle East and North Africa, Afr. for Africa, EU 27 for European Union 27 countries, Amer. for America, UK for United Kingdom, USA for United States of America.

Figure 2 – Impact of SCentral on bilateral trade flows in value at FOB prices in 2030, percentage change as compared to the baseline



Source: MIRAGE-Power, CEPII, and authors' calculation.

Note: Strategic trade relations only; green arrows indicate increases in trade, grey arrows decreases in trade; the width of the variation is proportional to the intensity of the variation.

(17) Alfaro and Chor (2023).



Table 3 presents the impact of the trade war by large sectors and by country or region. In China, industrial production is declining, while it is increasing in the agricultural and agri-food sectors. In the United States, production is increasing in industry, but decreasing in agriculture and agri-food, energy and mining, and services. These changes in production do not correspond to the traditional pattern of global comparative advantages where the US typically excels in agriculture, energy and services, while China outperforms in industry.

## 4. Five other key lessons from this modeling exercise

We now use the four other scenarios described in Table 1 to draw some additional conclusions. Table 4 presents the impact of all scenarios on exports and GDP in volume by country or region in 2030.

### 4.1. The devil is in the details

This section presents a comparative analysis of scenario SMin10 and S+10, which impose a minimum tariff of 10% on all goods and a 10 pp tariff augmentation on all goods, respectively. Given the lack of specificity in Trump's proposals, this analysis illustrates how the specifics of the tariff schedule could have significant consequences on the impact of these two policies.

Looking at Table 5 in the appendix, the difference in protection applied by the US is significant between scenarios SMin10 and S+10. On products coming from the rest of the world, e.g., it is 12.0% under SMin10 and 14.8% under S+10. The latter scenario implies systematically more protection on the US side than the former. These differences in protection applied by the US may result in different impacts on GDP and trade. For illustration, US loss of GDP is 0.4% in S+10 instead of 0.3% in SMin10. In S+10, the impact of these new customs duties in the US imply an increase in exports of 4.5% for Canada and 9.2% for Mexico, instead of 3.4% and 7.7% when the scenario SMin10 is implemented. Note that, for the United States, these two scenarios of increases in US customs duties without retaliation by its trading partners imply a fall in its imports (-7.1%; figure not apparent in Table 4), but also in its exports. MIRAGE assumes that the real exchange rate adjusts so that the current account balance as a proportion of GDP remains constant as compared to the baseline.<sup>18</sup> Here, the adoption in the US of tariffs on imports

(18) This assumption may seem strong. However, on the one hand, adopting a variable current account assumption would mean that countries can lend or borrow to finance this variation in their current account balance. MIRAGE does not model the international capital market. On the other hand, it would be impossible to interpret a variation in a country's real income, as an increase could be entirely implied by an increased debt with the rest of the world, and not by the policy evaluated.

leads to an appreciation of the real exchange rate, which implies a sufficient contraction in exports for the current account balance to remain constant as a proportion of GDP as compared to the baseline.

### 4.2. An eye for an eye and a tooth for a tooth

We now compare scenarios S<sub>Central</sub> and S+10/60. The former scenario consists of the latter plus retaliation by all US trading partners (with the exception of Canada and Mexico).

An important objective of trade retaliation is to punish the initiator of the trade war – here the United States. While under the scenario without retaliation, the loss of GDP in 2030 for the US is -0.7% in terms of GDP and -15.2% in terms of exports (see Table 4), these losses are greater with trade retaliation: -1.3% and -22.9% respectively. This retaliation is severe as the loss of GDP is almost doubled and the loss of exports in volume is increased by more than 50%.

Understanding the reasons why countries retaliate is fundamental. The initial response to this issue given by economic analysis is simple: countries retaliate if this decision increases their GDP or their real income. In the academic literature on trade wars, initiated by large countries and motivated by changes in terms of trade, small countries are not supposed to retaliate as this is a costly decision for them; without monopsony power on the world market, retaliation is costly as it implies distortions while terms of trade are unchanged.<sup>19</sup> Under monopolistic competition and firm heterogeneity, but also terms-of-trade externality, large and small economies set tariffs at (Nash) equilibrium, but small economies set lower tariffs.<sup>20</sup> From the point of view of economic

historians, small countries have retaliated against big countries, but have rapidly negotiated a cessation of trade hostilities, even at a significant price for them.<sup>21</sup> Following the Smoot-Hawley Tariff Act of June 1930, many US trading partners retaliate. Strategic considerations may justify small countries exerting retaliation; the short-term cost may be compensated for by a long-term gain from a "harsh reputation" effect. Political economy considerations may also justify it; in the case of a loss of market access caused by foreign protectionism, a political leader who does not react may look weak to her(his) constituents.

In our simulation, we adopt the simple assumption that all countries targeted by US tariffs retaliate. Of the 17 countries or regions initially affected by US trade policy (over the 20 countries or regions included in this modelling exercise, we exclude from this count the US, Canada and Mexico), the retaliatory decision reduces the loss of GDP of only seven regions or countries: in particular, for Australia/New Zealand, France, Germany, the rest of the European Union, and South Korea.

(19) See Johnson (1953).

(20) Felbermayr *et al.* (2013).

(21) Conybeare (1987).

Table 3 – Impact of SCentral on production in volume by large sectors in 2030, percentage change as compared to the baseline

Region	Agriculture and food	Energy and Mining	Industry	Services
ASEAN	0.1	-0.4	0.7	0.0
Australia and NZ	0.5	-0.8	0.8	0.0
Brazil	0.5	-0.4	-0.3	0.0
Canada	-2.8	-0.7	11.2	-0.3
China	0.3	0.3	-1.3	-0.3
France	-0.1	0.2	-0.1	0.0
Germany	0.2	-0.1	-0.2	0.0
India	0.2	-0.3	-0.4	0.0
Japan	1.1	0.1	-0.4	0.0
Korea	0.7	-0.4	-0.2	0.0
Mexico	-3.5	-1.0	15.4	1.0
MENA	0.2	0.0	-0.1	0.0
Rest of America	0.8	0.6	0.8	-0.1
Rest of Asia	0.6	-0.3	-0.1	-0.1
Rest of Europe	0.2	-0.1	-0.6	0.0
Rest of EU 27	0.0	-0.2	-0.1	0.0
Rest of Latin America	-0.2	0.2	0.6	-0.1
Sub-Saharan Africa	0.2	-0.5	-0.7	0.0
UK	0.0	0.0	-0.9	0.0
USA	-2.5	-0.4	2.2	-0.5

Source: MIRAGE-Power, CEPII, and authors' calculation.

Note: ASEAN stands for Association of Southeast Asian Nations, NZ for New Zealand, MENA for Middle East and North Africa, Afr. for Africa, EU 27 for European Union 27 countries, Amer. for America, UK for United Kingdom, USA for United States of America.

Table 4 – Impact of five scenarios on exports and GDP in volume by country/region in 2030, percentage change as compared to the baseline

Region	GDP					Exports				
	SMin10	S+10	S+10/60	SCentral	SNTM	SMin10	S+10	S+10/60	SCentral	SNTM
Mexico	1.9	2.3	6.5	6.6	8.7	7.7	9.2	25.8	26.1	33.6
Canada	0.5	0.7	1.2	1.3	1.8	3.4	4.5	7.9	8.3	11.1
ASEAN	-0.5	-0.6	0.3	0.2	-0.7	-1.4	-1.7	0.9	0.4	-1.7
Australia and NZ	-0.1	-0.1	-0.1	-0.1	-0.2	-0.4	-0.5	-0.8	-1.0	-1.5
France	-0.1	-0.2	-0.1	-0.1	-0.3	-0.5	-0.7	-0.5	-0.5	-1.2
MENA	-0.1	-0.1	-0.1	-0.1	-0.3	-0.3	-0.4	-0.4	-0.5	-0.8
Sub-Saharan Africa	-0.1	-0.1	-0.1	-0.1	-0.3	-0.6	-0.6	-0.6	-0.8	-1.3
Rest of Europe	-0.1	-0.2	-0.2	-0.1	-0.3	-0.1	-0.5	-0.6	-0.7	-1.1
Germany	-0.2	-0.3	-0.3	-0.1	-0.3	-0.5	-0.6	-0.5	-0.6	-1.1
Rest of EU 27	-0.2	-0.2	-0.2	-0.1	-0.3	-0.4	-0.5	-0.4	-0.4	-0.8
Japan	-0.1	-0.2	-0.1	-0.2	-0.3	-1.4	-1.6	-0.9	-1.9	-3.3
Rest of Asia	-0.4	-0.5	-0.2	-0.2	-0.7	-1.8	-1.8	-0.5	-0.9	-2.9
Brazil	-0.2	-0.2	-0.1	-0.2	-0.4	-1.2	-1.2	-1.0	-2.3	-4.0
Rest of Latin America	-0.3	-0.3	-0.2	-0.2	-0.6	-2.0	-1.7	-1.2	-2.9	-5.3
Rest of America	-0.2	-0.1	0.0	-0.2	-0.7	-0.4	-0.4	-0.3	-1.0	-1.8
Korea	-0.3	-0.3	-0.3	-0.3	-0.6	-0.8	-0.8	-0.6	-1.0	-2.2
UK	-0.2	-0.3	-0.2	-0.3	-0.5	-1.3	-1.5	-1.1	-1.4	-2.6
India	-0.2	-0.3	-0.2	-0.3	-0.6	-1.2	-1.5	-0.8	-1.3	-3.2
USA	-0.3	-0.4	-0.7	-1.3	-1.9	-8.2	-10.7	-15.2	-22.9	-31.4
China	-0.1	-0.2	-1.1	-1.3	-1.3	-1.0	-1.6	-7.6	-8.9	-9.0

Source: MIRAGE-Power, CEPII, and authors' calculation.

Note: Countries/regions are ranked by decreasing impact on GDP in the central scenario; ASEAN stands for Association of Southeast Asian Nations, NZ for New Zealand, MENA for Middle East and North Africa, Sub-S. for Sub-Saharan, Afr. for Africa, EU 27 for European Union 27 countries, Amer. for America, UK for United Kingdom, USA for United States of America.

Among the countries where GDP loss is bigger with worldwide retaliation, China's GDP decreases by 1.3% under S-Central (scenario with retaliation) against a reduction of 1.1% under S+10/60 (scenario without retaliation). So, while the European Union benefits from worldwide retaliation, China does not. However, a strategic reason for China could be that this retaliation inflicts a larger decrease of GDP and exports to the US. China might accept being hurt by imposing tariffs on its imports if this hurts the US.

China's positioning in global value chains could explain the finding that the country's GDP is negatively affected by trade retaliation.

Given that it is a major importer of intermediate goods and exporter of finished goods, the imposition of tariffs reduces its competitiveness, which in turn affects its economic activity.

For Canada and Mexico, the scenario with retaliation is slightly better than the one without, in terms of both GDP and exports; the implementation of custom duties on US products in all countries worldwide increases the relative competitiveness of Canadian and Mexican products on all these markets.

In a nutshell, it may be argued that, in our simulation, the cost of a trade war is overestimated for the US, but considerations arising from game theory and political science may temper this conclusion.

*it is impossible to replace US federal income tax revenues with customs revenues*

### 4.3. One man's loss is another man's gain

Let us now compare scenario S+10 with S+10/60. In scenario S+10, the US augments customs duties by 10 pp on all countries, apart from Canada and Mexico. The S+10/60 scenario differs by the augmentation of US customs duties by 60 pp against China, rather than 10 pp.

From Table 4, we see that, in scenario S+10/60, China's exports fall much more, as does its GDP. For the 16 other countries or regions, which are only penalized by a 10 pp increase in customs duties on their exports to the United States (other than Canada and Mexico), 12 countries or regions gain from the +60 pp tariff on China, in terms of both GDP and exports. There are four exceptions: Australia/New Zealand, South Korea, the Rest of Europe group, which includes Russia, and Sub-Saharan Africa.

For these 16 countries or regions, this increase in US protection against China, with other tariffs unchanged, has two effects. On the one hand, they gain relative access to an important market (US tariffs on European products, e.g., are unchanged, but they increase on Chinese goods); this effect should increase their exports. On the other hand, their exports to China are penalized because the increase in US protection on Chinese products reduces Chinese GDP by 1.1% instead of 0.2%. This effect is negative for these countries' exports and activity. It is particularly significant when China accounts for a large

proportion of their exports. This is the case for Australia/New Zealand (China accounts for 19.5% of their total goods exports in 2030), Korea (21.0%), the Rest of Europe group (11.9%), and Sub-Saharan Africa (11.4%).

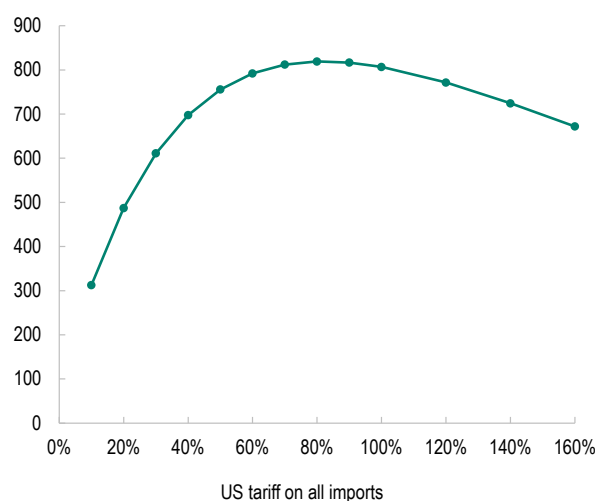
### 4.4. Money talks

Donald Trump has also proposed replacing federal income tax with customs revenue. Is it possible to tax US merchandise imports in such a way as to generate enough revenue to offset the cancellation of the federal income tax? This tax generates over US\$ 2,000 billion today.

To assess whether customs revenues can reach this sum, we apply a single customs duty in the US to all imported products from all origins (including Canada and Mexico) in the MIRAGE model, and gradually increase it (by 10 pp steps) to assess the customs duty that maximizes customs revenues, and the corresponding amount of customs revenues.

The results of this exercise are given in Figure 3. The tariff that maximizes US customs revenues is 80%, generating customs revenues of US\$ 819.3 bn.<sup>22</sup> This is much less than the actual amount of federal income tax of over \$ 2 trillion. Thus, it is impossible to replace US federal income tax revenues with customs revenues, which increase when a single tariff increases from 0% to 80%, but decrease beyond that.

Figure 3 – US customs revenue with unique customs duties on all imports - US\$ bn



Source: MIRAGE-Power, CEPII, and authors' calculation.

However, such an 80% tariff on all US imports would reduce world trade by 10.8%, world GDP by 1.6%, US imports by 41.5% and US GDP by 2.7%.<sup>23</sup>

(22) This is not the welfare-maximizing or GDP-maximizing tariff, but the one that maximizes customs revenue.

(23) This is the impact of an 80% US tariff on all imports of goods coming from all countries worldwide. We do not remove the federal income tax in this scenario.



This result does not differ strongly from a recent assessment by Clausing and Obstfeld (2024); they conclude that the revenue-maximizing tariff is 50% and it would generate a customs revenue of US\$ 780 bn. However, their method is based on a simple assumption of a unitary elasticity of imports to tariffs.

#### 4.5. “... the worst is not so long as we can say ‘This is the worst’”<sup>24</sup>

The trade war modeled by scenario S<sub>Central</sub> implies, except for Canada and Mexico, a global crisis in terms of GDP and trade. But it is possible to imagine an even more disastrous trade war, in the form of an increase in bilateral non-tariff measures, in the US on all products from all exporting countries in the world, except Canada and Mexico, and in all countries in the world, except Canada and Mexico, on US products. We therefore add to the scenario S<sub>Central</sub> an increase in non-tariff measures in the form of a 25% increase in their ad valorem equivalent, on the flows indicated above. This is the scenario S<sub>NTM</sub>. In practical terms, this could take the form of much stricter administrative surveillance of incriminated products by the customs authorities of the countries concerned. We comment on the results by comparison with scenario S<sub>Central</sub> in Table 4.

For all countries or regions except Canada and Mexico, the S<sub>NTM</sub> scenario implies even greater losses in GDP and exports. France suffers a reduction in its total exports of 1.2% instead of 0.5% (for GDP it is -0.3% instead of -0.1%), while Brazil, India and South Korea suffer a doubling of their GDP loss. For the US, there is a much sharper reduction in its total exports (-31.4% instead of -22.9%) and a fall in its GDP of almost 2% instead of -1.3%. However, China’s economic situation remains relatively unchanged as compared to S<sub>Central</sub> where it is already highly discriminated. Meanwhile, Canada and Mexico benefit from the very strong increase in protection that their main export destination applies to their competitors. This is especially the case for Mexico, whose exports increase by 33.6% instead of 26.1%.

## ■ Conclusion

This *Policy Brief* estimated the effects of Donald Trump’s central protectionist proposal and the resulting retaliation by countries trading with the US. The consequences are severe for the global economy, with total exports falling by 3.4% and world GDP by 0.5% in 2030. The US and China would be the most affected, with their bilateral trade almost fully decoupled.

We show first that trade retaliation by US partners severely punishes the choices made by the new US administration. Second, the US choice to punish China more severely lessens

the negative effects of this trade war for the United States’ other trading partners (such as France, Germany, Japan...). Third, it is not possible to totally replace

US federal taxes with customs revenues. Finally, if countries also use non-tariff measures, the impact of this trade war would be even more devastating.

This modeling exercise does not consider certain effects. For example, this trade war would reinforce uncertainty from the deconsolidation of tariffs, which should have a strong negative impact on investments linked to trade operations. Furthermore, the trade war would likely amplify bilateral trade deficits, for example between China and the European Union. This could further reinforce protectionist pressures worldwide. However, the seriousness of this trade war might be tempered by the fact that not all US partners would retaliate, since the US is so economically and financially powerful.

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*The US and China would be the most affected, with their bilateral trade almost fully decoupled*

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(24) This quote, from Shakespeare’s *King Lear*, means that there is always a worse situation than the one you think is the worst.

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## Appendix

Table 5 – Average customs duty imposed by importer on products coming from exporter – 2025 - Baseline and 5 scenarios (in %)

Exporter	Importer	Baseline	SMin10	S+10	S+10/60	SCentral	SNTM
Rest of the World	USA	5.5	12.0	14.8	22.3	22.3	22.3
China	USA	4.1	10.1	14.1	64.1	64.1	64.1
EU	USA	2.9	10.0	12.9	12.9	12.9	12.9
USA	Rest of the World	4.5	4.5	4.5	4.5	19.2	19.2
USA	China	8.8	8.8	8.8	8.8	68.8	68.8
USA	EU	3.3	3.3	3.3	3.3	13.3	13.3

Source: Authors' calculations from MacMAP-HS6.

Note: EU stands for European Union, Rest of the World includes China and EU. Grey cells emphasize cases in which the average customs duties are higher than the baseline.

Table 6 – Impact of scenario SCentral on bilateral trade flows in value at FOB prices in 2030, percentage change as compared to the baseline

	Importer																			
	ASEAN	Australia and NZ	Brazil	Canada	China	France	Germany	India	Japan	Korea	Mexico	MENA	Rest of America	Rest of Asia	Rest of Europe	Rest of EU 27	Rest of Latin America	Sub-Saharan Africa	UK	USA
ASEAN	0.7	1.5	3.4	10.8	-4.6	1.9	1.6	0.1	0.4	1.8	35.6	1.3	3.5	0.0	0.8	2.1	4.6	-0.8	1.8	1.7
Australia and NZ	0.9	1.3	5.0	12.7	-4.6	3.6	3.0	1.5	2.9	4.6	27.8	1.7	3.6	0.4	1.3	2.3	3.5	-0.1	2.2	-8.1
Brazil	-0.3	-0.2	0.0	10.8	-0.1	-0.3	-0.1	-1.2	0.5	0.4	26.1	-0.2	8.2	-0.4	-0.9	-0.1	2.9	-2.2	-0.1	-15.2
Canada	-8.2	-8.0	-7.0	0.0	-10.5	-8.3	-7.7	-8.5	-5.5	-7.6	16.9	-7.7	-5.1	-8.9	-8.5	-9.5	-1.0	-9.3	-7.7	17.5
China	6.6	6.7	11.1	19.4	0.0	7.1	6.6	5.5	5.2	5.9	41.1	7.4	15.2	5.7	6.4	7.3	11.7	5.4	7.8	-80.5
France	0.7	1.6	3.4	12.6	-6.0	0.0	0.9	0.2	0.7	0.6	29.8	1.4	5.0	-0.4	0.6	1.1	3.6	-0.8	1.1	-11.3
Germany	0.6	2.1	3.8	18.3	-6.1	0.8	0.0	-0.4	1.3	0.2	29.7	0.9	2.7	-0.2	0.8	1.3	4.3	-1.2	1.7	-12.7
India	0.5	1.1	5.7	13.7	-6.6	1.6	1.7	0.0	1.2	-0.4	30.3	0.7	6.3	0.0	1.5	2.1	5.8	-1.0	1.7	-10.4
Japan	1.3	2.6	4.6	22.1	-4.5	1.7	2.3	0.9	0.0	1.2	30.8	1.7	1.8	0.9	1.8	2.1	4.2	-1.0	2.3	-13.7
Korea	1.2	3.4	4.4	22.4	-4.0	1.8	2.0	0.8	0.8	0.0	35.4	2.0	2.1	0.9	2.2	2.6	5.5	-0.3	2.9	-9.4
Mexico	0.2	-8.4	-18.1	-0.6	-6.6	0.5	-16.5	-17.1	-13.1	-18.3	0.0	-17.1	-15.8	-12.7	-20.6	-16.7	-9.5	-14.0	-16.2	33.6
MENA	0.1	0.4	4.9	14.3	-2.2	1.7	1.4	0.6	1.7	1.9	28.8	0.8	6.5	-0.3	0.1	1.8	4.5	-0.7	0.7	-15.4
Rest of America	-1.4	-1.9	0.1	11.2	-7.9	-1.7	-1.8	-2.0	-2.6	-2.4	26.3	-1.8	4.7	-3.1	-1.8	-1.4	1.4	-3.3	-1.5	0.3
Rest of Asia	1.6	0.8	3.8	12.4	-4.7	1.2	1.3	0.9	0.6	1.3	33.6	1.7	4.1	0.6	1.4	1.6	3.8	0.2	1.4	-2.4
Rest of Europe	-0.4	1.1	4.6	13.5	-3.0	0.5	0.7	0.0	0.7	1.4	30.1	2.0	10.0	-0.2	0.4	1.5	6.0	0.2	1.7	-7.3
Rest of EU 27	0.3	0.9	2.3	13.8	-6.3	0.4	0.5	-0.5	0.3	-0.3	28.3	0.3	4.0	-0.8	0.3	0.8	3.2	-1.1	0.9	-10.2
Rest of Latin America	0.0	-0.1	2.2	10.9	-5.0	-0.2	0.4	-0.2	-0.4	-0.7	24.0	-0.1	10.1	-1.0	-0.5	0.2	4.5	-1.0	0.3	-14.0
Sub-Saharan Africa	1.3	1.7	6.0	16.8	-3.7	2.6	2.8	1.4	0.0	0.6	22.3	1.3	2.8	0.0	1.4	2.5	6.6	-0.1	2.6	-14.1
UK	0.1	0.5	2.2	14.6	-6.8	0.2	0.5	0.2	-0.3	-0.7	28.1	0.1	3.6	-1.0	0.0	0.8	3.0	-1.1	0.0	-6.7
USA	-26.8	-27.6	-23.4	4.0	-58.0	-26.8	-29.7	-25.2	-29.4	-30.7	16.8	-27.9	-13.4	-30.8	-23.8	-27.5	-26.0	-21.2	-21.4	0.0

Source: MIRAGE-Power, CEPII, and authors' calculation.

Note: ASEAN stands for Association of Southeast Asian Nations, NZ for New Zealand, MENA for Middle East and North Africa, Sub-S. for Sub-Saharan, Afr. for Africa, EU 27 for European Union 27 countries, Amer. for America, UK for United Kingdom, USA for United States of America.

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## Policy Brief



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