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"THE ECONOMIC IMPACT OF THE U.S.-CHINA TRADE TENSIONS"

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INTRODUCTION

At the beginning of 2018, Donald Trump started imposing the first tariffs. Firstly it was on washing machines and solar panels, then on aluminum and steel and after that he decided to target Chinese goods, triggering an escalation of tariffs and retaliatory tariffs that would last for the following two years. This trade conflict has been defined as "*the biggest tariff war of the century*", and it will be the theme of this thesis.

The script will start with a brief overview of the commercial relationship between the United States and China in the last 50 years. It will continue with a definition of what "tariff" means and what are the generic economic consequences of implementing such a policy. The purpose of this chapter is to give some context and to understand the roots behind the decision of imposing tariffs.

It will then explain the tariffs in detail, dividing between solar panels and washing machines, steel and aluminum, and Chinese products. It will focus on the single phases that characterized the bilateral conflict.

Then, through the results of some papers, it will analyze the short-run and the long-run effects of the tariff war among the United States, China and the other countries in general. It will focus on some macroeconomic indicators such as the GDP, the exportations and importations, the effect on prices. It will also try to understand the effect on the single sectors and to implement the effect of uncertainty.

At the end, it will illustrate the latest developments and try to predict what will follow the Phase One Deal.

CHAPTER ONE

1.1 BRIEF HISTORY OF THE COMMERCIAL RELATIONSHIP BETWEEN THE UNITED STATES AND CHINA

The United States and China are the world's two largest economies.

The U.S. has a larger nominal Gross Domestic Product (21,439.453 billion dollars against China's 14,140.163 billion dollars)[1] whereas China is at the top when we consider GDP based on Purchasing Power Parity (27,308.857 against 21,439.453 billion dollars)[2].

China is the world's largest exporter (2,157,000 million dollars) and the United States is the world's largest importer ($2,352,000 million dollars)[3]. China is the first commercial partner of the USA and it is also its first importer, the USA imported over than 341,960.4 million dollars in goods from China in 2019 (September 2019) against the 78,762.0 million of dollars of exportations to China, with the result of a negative balance of -263,198.4.[4]

This result is persistent, the United States has been running a trade deficit with China since the 1980s. Before then the situation was different, in the '70s, in fact, the United States sold to China more products than they bought from China. For what concerns the '50s and the '60s, the Sino-US relation was uniformly hostile as there hasn't been communication or diplomatic ties between the two countries for 25 years.

1971 represents a turning point, in this year the President of USA, Richard Nixon revealed to the world that he accepted an invitation to visit the People's Republic of China. That was the climax of a series of events that would have brought the economic isolation of China to an end. Before that, happened the "ping-pong diplomacy", this refers to the exchange of table tennis players between the two countries, an event that marked a thaw in Sino-US relations.

[1] "World Economic Outlook Database, October 2019" IMF.org

[2] "World Economic Outlook Database, October 2019" IMF.org

[3] "COUNTRY COMPARISON: IMPORTS". Central Intelligence Agency. https://www.cia.gov/library/Publications/the-world-factbook/rankorder/2087rank.html

[4] Census, Foreign Trade https://www.census.gov/foreign-trade/balance/c5700.html

Since then, and during all the '70s, a lot of measures were adopted by the Nixon administration to remove restrictions on commerce and travel between the two countries. This brought not only to the end of the U.S. trade embargo on China but to the conferment of Most Favored Nation (MFN) status on China in 1980.

The MFN status means that the country cannot be treated less advantageously than all the other countries with the MFN status, which implies trade advantages like low tariffs or import quotas

"Chart 1 presents trade data for the first decade of renewed commercial activity between the two countries. The data show continued growth in trade with a trough in U.S. exports to China during 1975–1977. […] During this period, as said before, the United States sold to China more products than it bought from China, although America's trade with China never amounted to more than 1 percent of total U.S. world trade.

By the end of the decade, the total trade between the two nations was doubling each year, from US$1.1 billion in 1978 to $2.3 billion in 1979 to $4.8 billion in 1980."[5]

The '80s witnessed the restructuring of the Chinese domestic economy, which basically could be defined by "reform and opening": reform of the economic system and opening to foreign trade.

This involved the privatization of much state-owned industries and the lifting of price controls, protectionist policies, and regulations. Foreign investment was legalized, the most popular kind of investment was joint ventures and some of the early participants were H. J. Heinz, Coca-Cola, American Express, Gillette, Eastman Kodak.

The role of foreign trade under the economic reforms increased far beyond its importance in any previous period. Trade statistics, illustrated in Chart 2 contains ambiguity "*The American statistics show in fact, that 1986 was a turning point, with a US$1.67 billion trade deficit against the United States, which kicked off a deep, quarter-of-a century trade deficit with the People's Republic. In stark contrast, the Chinese figures for 1986 show a more than US$1*

[5] Dong Wang; *"U.S.-China Trade, 1971–2012: Insights into the U.S.-China Relationship 米中貿易 1971～2012年　中日関係についての洞察"*; in The Asia-Pacific Journal Japan Focus; Volume 11 Issue 24 Number 4 Article ID 3958; Jun 16, 2013

billion deficit against the P.R.C.—one point on the long curve of a trade deficit stretching from 1973 through 1992."[6]

Part of this dispute can be traced back to whether American and Chinese exports and imports channeled through Hong Kong, over US$1.125 billion worth of goods, should legitimately be considered part of U.S.-China trade.

According to the Chinese government, 60 percent of Chinese exports to the United States in the mid-1980s were initially consigned to buyers in Hong Kong, who then shipped them to the United States. They argued that the appreciation accrued through re-export markups should not be computed as China's direct imports to the U.S. goods.

"Also, before 1993 the Chinese authorities did not keep an account of the final destinations of goods exported through Hong Kong, which might have compromised the value and volume of Chinese exports to the American market."[7]

During the '90s the relationship was challenged by two major events:

The first one is the "Tiananmen Square Massacre", troops with assault rifles and tanks fired at the demonstrators, most of them were students and blue-collar. Estimates of the death toll vary from several hundred to several thousand, with thousands more wounded.

The protest born as a march to participate in the memorial service of Hu Yaobang, a high-ranking official of the People's Republic of China. His ideas in favor of the freedom of speech and freedom of the press were praised by the demonstrators, and his destitution became a representation of the nepotism of the elite party bureaucrats. Some other reasons can be traced back to the political corruption and the higher levels of inflation appeared after thirty years of steady prices. This was traced back to the reduction in government controls, deriving from of the aforementioned economic reform. During the early 1980s in fact consumers' incomes

[6] Dong Wang; *"U.S.-China Trade, 1971–2012: Insights into the U.S.-China Relationship 米中貿易 1971～2012年　中日関係についての洞察"*; in The Asia-Pacific Journal Japan Focus; Volume 11 Issue 24 Number 4 Article ID 3958; Jun 16, 2013

[7] Dong Wang; *"U.S.-China Trade, 1971–2012: Insights into the U.S.-China Relationship 米中貿易 1971～2012年　中日関係についての洞察"*; in The Asia-Pacific Journal Japan Focus; Volume 11 Issue 24 Number 4 Article ID 3958; Jun 16, 2013

increased because of the overall expansion in productivity and the income-earning possibilities. As consequence the amount of money in circulation increased fairly rapidly and unexpectedly.

The United States Congress and media criticized this military action. In reaction to the violent event, President Bush suspended all government-to-government sales and commercial exports of weapons.

The second event is the famous southern tour of China of Deng Xiaoping, he used these travels as a method of reasserting his economic policy after his retirement from office.

This was the beginning of what could be defined as the second phase of the economic reform that would continue after the death of Deng in 1997, under his successors Jiang Zemin and Zhu Rongji. This new stage aimed at reforming the banking system, reduce inflation and ultimately at joining WTO (World Trade Organization).

Following the massacre of pro-democracy demonstrators in Tiananmen Square in 1989, the annual renewal of China's MFN status became a source of considerable debate in the Congress; a legislation was introduced to terminate China's MFN/NTR status or at least to impose additional conditions related to improvements in China's actions on various trade and non-trade issues.

The Clinton presidency from 1992 started with an executive order that linked the renewal of China's MFN status with seven human rights conditions, including "preservation of Tibetan indigenous religion and culture" and "access to prisons for international human rights organizations". However, Clinton reversed this position a year later.

In the last year of his presidency, Bill Clinton called on Congress to help him change China's normal trade relations status with the U.S., to permanent.

After years of negotiations and significant changes to its economy, China became a member of the World Trade Organization (WTO) on 11 December 2001.

By doing so, China could benefit lower tariffs and nontariff barriers to trade and the prevention of trade discrimination guaranteed by the rules of WTO. WTO binding rules require non-discriminatory "national treatment" and "most-favored-nation treatment" for the traded products of WTO members, to help exporters and importers to trade as efficiently as possible. It also contributed to growth in international trade and investment.

The conditions in which China agreed to join the WTO, were harsher than them for the other developing countries. After China joined the WTO, its service sector was liberalized and

foreign investment was allowed, banking, financial services, insurance, and telecommunications were also opened up to foreign investment.

During the first twelve years of the twenty-first century, the two countries became one another's largest or second-largest trade partner. "*Figures from both countries show that in 2012 American exports and imports (in goods, excluding services) were worth US$3.82 trillion, while China's total trade volume reached US$3.87 trillion. For the first time, China thus exceeded the United States as the world's largest trading nation. The 2012 U.S. trade deficit with China was $315.1 billion, a record high."*[8]

For what concerns the theft of intellectual properties it can be traced back to the entrance of China in the WTO when it was demanded to resolve grievances including the protection of copyrights and patents. At the time, the combination of the fact that China was a major source of pirated musical CD and software and that there was basically no enforcement of laws on intellectual property rights, represented a big deal for American companies. But even after the entry into the WTO, China kept stealing U.S.'s IP and the problem for the U.S. went on, or better, grew, along these years. A similar issue is the one concerning the forced transfer of American technology to China. China always forced American companies to transfer technology to access the Chinese market, even after the entry into the WTO, and that represents a direct violation of its rules. Apparently, those forced technology transfer consists of mandatory joint ventures, buying U.S. technology companies and using cyber theft, besides forcing American companies to hand over their technologies as a cost of entering the Chinese market.

[8] Dong Wang; *"U.S.-China Trade, 1971–2012: Insights into the U.S.-China Relationship 米中貿易 1971～2012年　中日関係についての洞察"*; in The Asia-Pacific Journal Japan Focus; Volume 11 Issue 24 Number 4 Article ID 3958; Jun 16, 2013

1.2 THE DEFINITION AND THE ECONOMICS BEHIND A TARIFF

"A tariff is simply a tax on imports. An importer of cars, for example, may be charged $2,000 for each auto brought into the country. Such a tax will, of course, make automobiles more expensive and favor domestic models over imports. It will also raise revenue for the government."[9]

Tariffs will reduce international trade and increase the prices of domestically produced goods. Domestic producers are, in fact, not forced to reduce their prices as they should if they were in competition with foreign producers. The result is that domestic consumers are left paying higher prices. In a more competitive market, some companies would not be able to survive, so tariffs end up reducing efficiencies by allowing companies to remain open.

Tariffs limit trade and consumers pay higher prices. This can be justified by some reasons like gaining a price advantage for domestic firms, protecting particular industries, or protecting the infant industries.

"A tariff forces foreign exporters to sell more cheaply by restricting their market access. If foreign firms do not cut their prices, they will be unable to sell their goods. So, in effect, a tariff amounts to government intervention to rig prices in favor of domestic producers. However, this technique works only as long as foreigners accept the tariff exploitation passively—which they rarely do. More often, they retaliate by imposing tariffs or quotas of their own on imports from the country that began the tariff game. Such tit-for-tat behavior can easily lead to a trade war in which everyone loses through the resulting reductions in trade".[10] And that's exactly what is happening in the US-China tariff war, with Trump adding tariffs, and China responding with more of them.

"The second, reason why countries restrict trade is to protect particular favored industries from foreign competition. If foreigners can produce steel or shoes more cheaply, domestic businesses and unions in these industries are quick to demand protection. […] Protective tariffs and quotas are explicitly designed to rescue firms that are too inefficient to compete with foreign exporters in an open world market. But it is precisely this harsh competition that gives

[9] Alan Blinder and William Baumol; "*Economics: Principles and Policy"*; Cengage Learning, 2010.

[10] Alan Blinder and William Baumol; "*Economics: Principles and Policy"*; Cengage Learning, 2010.

consumers the chief benefits of international specialization: better products at lower prices. […] Industries threatened by foreign competition often argue that some form of protection against imports is needed to prevent job losses. […] However, such job gains typically come at a high cost to consumers and to the economy. […] Nevertheless, complaints about proposals to reduce tariffs or quotas may be justified unless something is done to ease the cost to individual workers of switching to the product lines that trade makes profitable. […]Firms may be eligible for technical assistance, government loans or loan guarantees, and permission to delay tax payments. Workers may qualify for retraining programs, longer periods of unemployment compensation, and funds to defray moving costs."[11] About mitigating those issues the U.S. government has at its disposal a trade adjustment assistance that provides benefits, retraining programs and other aid to workers and firms that lose their jobs or their markets to imports. Nevertheless, the Trump tariffs have implemented, and it is possible to identify the industries protected as solar panels, the washing machines, steel and aluminum and the other products. Although these industries get actually boosted by the tariffs, the protection of the industries may not be the main reason for the deployment of the tariffs, also because of the declarations of Trump for which apparently the reasons of the tariff should be the trade deficit, the theft of IP and technology.

Technology is involved in the third argument: the need to maintain national defense.

Other important arguments are:

The need for the infant-industry for a protected environment, until they are developed and able to survive the competition with the international companies.

The "strategic argument for protection": a nation may have to threaten protectionism to achieve the free trade, managing to get the other nations to abandon their protectionist policies.

From an economic point of view, it is possible to compare the free trade equilibrium and the introduction of tariffs as in the next figures:

The first figure shows the benefits of free trade, depicted by the "Z" triangles. Indicating with E1 the equilibrium point without trading, (the encounter between the domestic supply and the domestic demand) it is possible to see how introducing free trade changes the equilibrium point

[11] Alan Blinder and William Baumol; "*Economics: Principles and Policy"*; Cengage Learning, 2010.

to E2. It lowers the prices from Pa to Pw and increases the quantities from Qa to Ct. The consumer surplus (previously W) increases by X+Z+Z (by decreasing the prices they can afford more goods) at the expense of the producer surplus, which gets reduced to Y.

The domestic production will be reduced to Qt (the quantity from Ct to Qt filled by imports). The total surplus, however, increases by Z+Z.

The second figure shows how things change when an import tariff is introduced. Prices rise and quantities lower, reducing the consumer's surplus, the area A+B+C+D, in fact, is no more consumer's surplus. The producer gains the surplus of A, C represents the government’s revenue from the tariff (import quantity times tariff), but the areas B and D are lost, death-weight losses.

Charts *(Source: Dong Wang; "U.S.-China Trade, 1971–2012: Insights into the U.S.-China Relationship 米中貿易　1971～2012年　中日関係についての洞察"; in The Asia-Pacific Journal Japan Focus; Volume 11 Issue 24 Number 4 Article ID 3958; Jun 16, 2013)*

Chart 1:

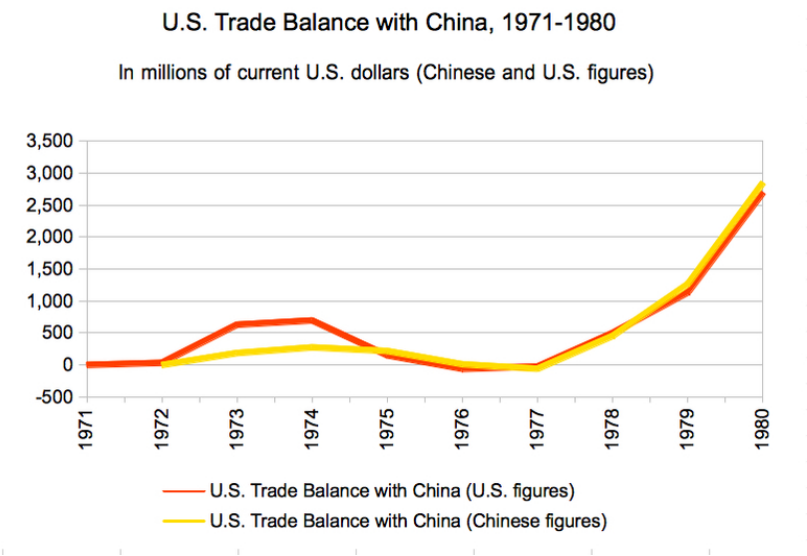


Chart 2:

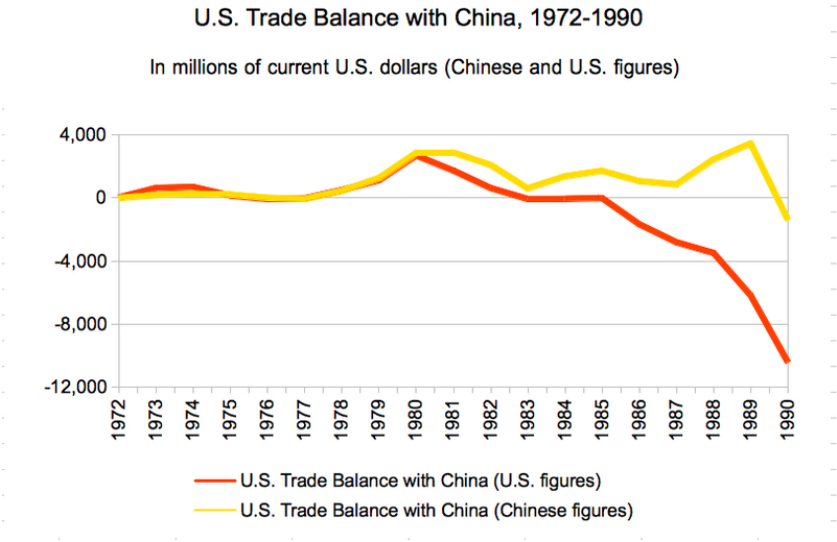
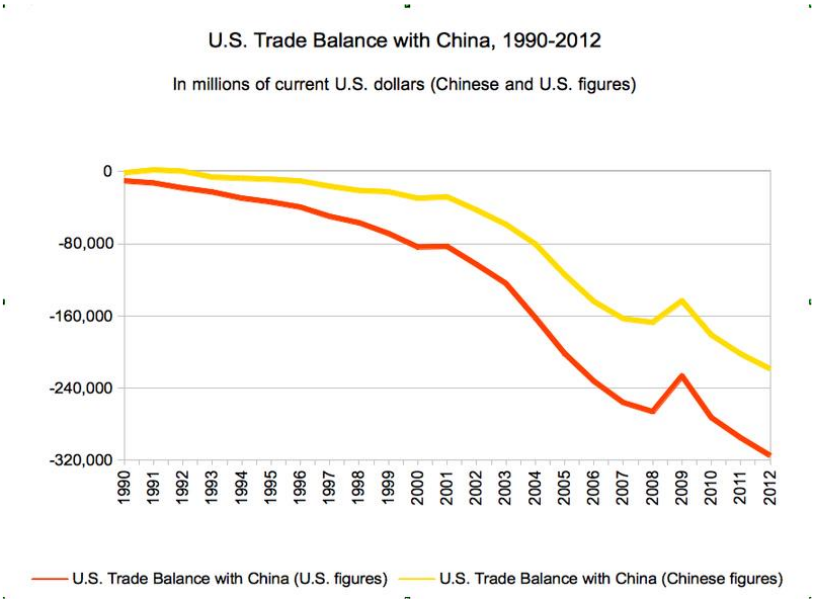


Chart 3:


U.S. Trade Balance with China, 1990-2012
In millions of current U.S. dollars (Chinese and U.S. figures)
0
-80,000
-160,000
-240,000
-320,000
1990
1991
1992
1993
1994
1995
1996
1997
1998
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2003
2004
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2011
2012
U.S. Trade Balance with China (U.S. figures)
U.S. Trade Balance with China (Chinese figures)

Figures

Figure 1:

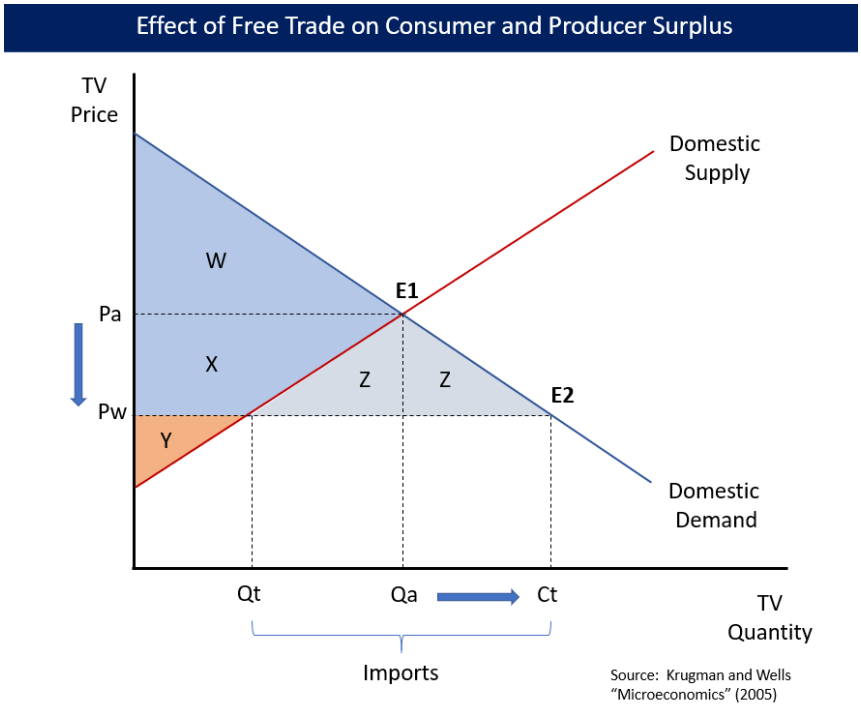
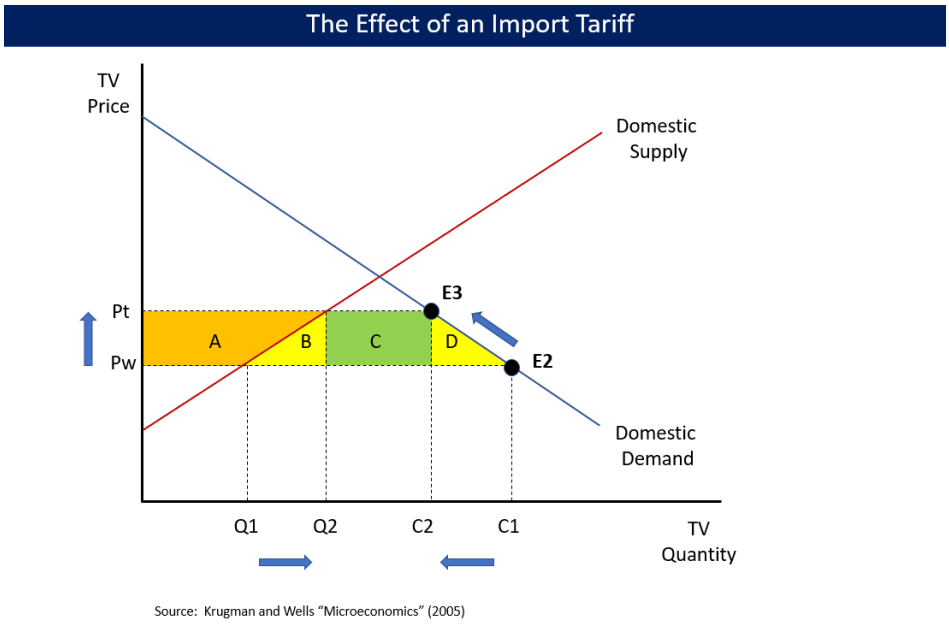


Figure 2:



CHAPTER TWO

Donald Trump's view about trade issues aligns with his "America First" economic policy: reduce the United States trade deficit through the renegotiation of the trade agreements and the imposition of tariffs.

During the process of shifting American trade policy from multilateral trade agreements to bilateral trade deals many important deals were often criticized by Trump. Two major examples are NAFTA, (North American Free Trade Agreement) the agreement which creates the trilateral trade bloc among Canada, Mexico, and United States, and the TTP (Trans-Pacific Partnership), the trade agreement between more than ten countries including Australia, Japan, and Canada, that never took effect because the USA withdrew its signature.

For what concerns the tariffs, excluding for a moment the trade war with China, which will be covered later, he imposed tariffs with most countries, including European Union, Mexico and Canada (the famous tariffs on steel (25%) and aluminum (10%)).

Trump also pledged to impose tariffs to discourage companies from relocating to other countries, through an "End the Offshoring Act": *"Establishes tariffs to discourage companies from laying off their workers in order to relocate in other countries and ship their products back to the U.S. tax-free."*[12]No such action has been introduced in Congress by now.

TRUMP'S TRADE WAR AGAINST CHINA TIMELINE

Trump's "trade war" can be divided into "battles" for an easier approach: **the solar panel and washing machines**, **the steel and aluminum** and **the Chinese products**. Also, the tariffs imposed by Trump against other countries, like for example the one against South Korean products or the proposed "auto tariffs" against Mexico, are not included in this list or are only mentioned, focusing on the relation between the United States and China only.

[12] Donald Trump's Contract with the American Voter

2.1 THE SOLAR PANEL AND WASHING MACHINES BATTLE

On the 22 of January 2018 Trump imposed safeguard tariffs on solar panels and washing machines.

The reason can be traced back to October 2017, when the U.S. International Trade Commission (USITC) determined that "*large residential washers are being imported into the United States in such increased quantities as to be a substantial cause of serious injury to the domestic industry producing an article like or directly competitive with the imported article*."[13]

It has been asked to President Trump to impose "global safeguard" restrictions.

This has been made possible because of Section 201 of the Trade Act of 1974. The USITC (US International Trade Commission) can investigate whether the domestic industry is injured by imports. The commissioners then conduct a vote: if it's positive or a tie the president can implement a policy response, otherwise, a negative vote ends the case.

In 40 of the 74 investigations, the USITC vote was either affirmative or tie.

When the USITC vote gives the president the right to proceed with a policy action, the president can implement many types of trade barriers, including import tariffs and quantitative restrictions. Otherwise, the law permits the president to refuse to impose trade barriers entirely.

"*Indeed, past presidents have implemented trade barriers in only 19 of the 40 cases in which an affirmative or tie vote provided the opportunity to implement protection between 1974 and 2016. This low yield is one reason why Section 201 has been used less frequently than laws like antidumping and countervailing duties. Under those other laws, the president plays no role. Thus, a USITC finding of injury coupled with the Department of Commerce rulings of unfairly low prices (antidumping) or foreign subsidies (countervailing duties) almost automatically leads to new import restrictions*."[14]

[13] https://www.usitc.gov/press_room/news_release/2017/er1005ll841.htm

[14] https://www.piie.com/blogs/trade-and-investment-policy-watch/solar-and-washing-machine-safeguards-context-history-us

Table 1:

	Year 1	Year 2	Year 3
First 1.2 million units of imported finished washers	20%	18%	16%
All subsequent imports of finished washers	50%	45%	40%
Tariffs on covered parts	50%	45%	40%
Covered parts excluded from tariff	50,000 units	70,000 units	90,000 units

These are the terms of the tariffs for three years for imports of large residential washer approved by President Trump.

"*Injury to U.S. washing machine manufacturers stems from a sharp increase in imports that began in 2012. The ITC found that imports of large residential washers increased "steadily" from 2012 to 2016 and that domestic producers' financial performance "declined precipitously*."[15]

[15] https://ustr.gov/about-us/policy-offices/press-office/press-releases/2018/january/president-trump-approves-relief-us

Table 2:

	Year 1	Year 2	Year 3	Year 4
Safeguard Tariffs on Modules and cells	30%	25%	20%	15%
Cells Exempted from tariffs	2,5 gigawatts	2,5 gigawatts	2,5 gigawatts	2,5 gigawatts

These are the terms of the tariffs for four years for imports of solar cells and modules approved by President Trump.

"The relief will include a tariff of 30 percent in the first year, 25 percent in the second year, 20 percent in the third year, and 15 percent in the fourth year. Additionally, the first 2.5 gigawatts of imported solar cells will be exempt from the safeguard tariff in each of those four years."[16]

This specific move against solar panel imports brings worries on the side of climate mitigation and slow the advance of the clean energies. US renewable energy industry is likely to suffer from it, since rising the price of solar energy could bring consumers to switch to more carbon-intensive coal.

[16] https://ustr.gov/about-us/policy-offices/press-office/press-releases/2018/january/president-trump-approves-relief-us

2.2 THE STEEL AND ALUMINUM BATTLE

On March the first, 2018 Trump announced a 25 percent tariff on steel and a 10 percent tariff on aluminum on imports from all trading partners. The reason was that these imports threatened the national security, since these industries are vital to protect the United States in case of war.

In 2017, a year before, Trump administration initiated two investigations, that ended covering United States imports of $31 billion of steel and $17 billion of aluminum in 2017, a total of $48 billion of trade. Trump decided to impose tariffs on all countries and products covered in the reports.

The order signed by Trump imposed the steel and aluminum tariffs effective on March 23. Canada and Mexico were exempted, because of them being members of the NAFTA. Later, on 22 March, Europe Union, South Korea, Brazil, Argentina, and Australia got also exempted from May 1, 2018.

25 percent steel tariff where applied to countries that exported $10.2 billion of steel products in 2017, and 10 percent aluminum tariff to countries that exported $7.7 billion, so the countries which have been hit imported a total of $17.9 billion on $48 billion of total steel and aluminum imports. In 2017, in fact, Canada and Mexico imported $15.3 billion (summing both steel and aluminum) and the other countries exempted through May 1, $14.8 billion. At the end only one third of the originally covered imports has been hit.

The criterion used by the administration to choose who is to be covered has been criticized because of being vague. The trade law used by Trump to impose these tariffs (Section 232 of the Trade Expansion Act of 1962) resulted been controversial since it provided the president to arbitrarily add or subtract trading partners and rise or lower the tariffs.

The impact on China was less than on other producers, because earlier trade restrictions already covered over 90 percent of United States imports of steel products from China, nonetheless, on the second of April 2018 China retaliated by imposing tariffs on aluminum, pork (25%), fruits, nuts, and much more (15%).

2.3 THE CHINESE PRODUCTS BATTLE

This division by stages is personal, it consists in three kind of stages:

The first stage of tariffs is the 25 percent tariffs on $50 billion of imports imposed both by China and the United States. The tariffs have been imposed in two tranches: on $32 billions first on 6 July 2019, and on $16 billion on the 23 of August.

The second stage consists in 10 percent tariffs on $200 billion of Chinese goods and tariffs on $60 billion of United States goods that range from 5 to 10 percent.

The third stage takes place along 2019 and is divided in two phases:

First phase, the second stage tariffs are increased to 25 percent, for what concerns the $200 billion of Chinese goods, and on average of 21 percent for the $60 billion Chinese products.

The second phase consists on the application of a 15 percent tariff on a $112 billion list by the United States, and a 5 to 10 percent tariff on $29 billion by China, on September 1st.

These are the tariffs that have been put in place. From the last stage in September both countries decided to work on a deal and so the other tariffs have been delayed.

2018

2.3.1 FIRST STAGE

Since the early months of 2018 Trump indicated forthcoming remedies of tariffs on Chinese goods ("*it could be about $60 billion..*"[17]) under Section 301 of the Trade Act of 1974. The tariffs would be imposed due to a report by the Trump administration, finding that China was conducting unfair trade practices related to technology transfer, intellectual property, and innovation.

Later in April a $50 billion list of 1333 Chinese products under consideration for tariffs (an additional duty of 25%) is released. "*The top sectors hit are machinery, mechanical appliances, and electrical equipment. Roughly 85 percent of the imports targeted by the tariffs are in intermediate inputs and capital goods.*"[18]

In response China publishes a list of 106 products including automobiles, airplanes, and soybeans, subject to a 25 percent forthcoming tariff on a total of $50 billion of China's imports from the United States.

The most classic behaviour in a trade war is set in motion: the tit-for-tat tariffs. If the opponent was previously cooperative, the agent is cooperative, if not, the agent is not. The next day, in fact, Trump responded saying that he was considering additional tariffs on $100 billion of Chinese imports, in order to "fight back".

The preparations for the first stage of tariffs were proceeding: in May the White House announced that it would impose tariffs on the $50 billion Chinese goods.

In June it announced the revised list of products, the new list included 818 (in July) plus 284 (hit in September) out of the original 1333 goods.

The top added goods were semiconductors and plastics. The goods dropped from the list were TV and flat panel screen, together with aluminum and steel. Obviously in the case of aluminum and steel it was just because they were covered by the tariffs under Section 232.

[17] https://www.whitehouse.gov/briefings-statements/remarks-president-trump-signing-presidential-memorandum-targeting-chinas-economic-aggression/

[18] https://www.piie.com/blogs/trade-investment-policy-watch/trump-trade-war-china-date-guide

The list targeted even more intermediate inputs, if previously the percentage of consumer goods hit were 12 percent, in the new list 95 percent of the products were intermediate or capital goods. As it will be explained later, targeting the intermediate goods is often a bad move, because it would hit the economy harder.

Together with the goods list Trump declares that the United States will impose a 25 percent tariff on $50 billion of Chinese export. It will be a two phases plan, starting with $34 billion of goods starting July 6th, and approximately $16 billion worth of imports on August 23rd.

China responded the same day with similar tariffs for the United States starting July 6th. It released the updated $50 billion list targeting mostly agricultural and food products (38 percent), the rest are intermediate goods (32 percent) and transport equipment (24 percent). It's possible to see that China avoided United States mistake of hitting too much intermediate goods.

The major differences between the new and the initial list are the addition of mineral fuels, some consuming goods and medical equipment, and the exceptions of aircrafts.

6th July 2018: Both the United States and China imposed the first phase of tariffs on 34$ billion of Chinese/U.S. imports.

In response to China's retaliatory tariffs, the White House declared that the United States would impose 10 percent tariffs on $200 billion worth of Chinese goods.

Four days after the first phase of tariffs was imposed, the United States released the list of an additional $200 billion of Chinese goods that would be subject to a 10 percent tariff. This time the consumer goods were more heavily targeted such as computers, luggage, lamps, furniture. True is that there were fewer and fewer supply chain element left to target.

In August the Trump Administration released a list of Chinese goods worth $16 billion to be subject to a 25 percent tariff rate, going into effect on August 23rd. In response, China imposed 25 percent tariffs on $16 billion of imports from the United States, which were expected to go into effect as soon as the Trump administration's tariff list was imposed on August 23rd.

23rd August 2018: The United States and China followed through with imposing tariffs on $16 billion of imports.

End of the first stage. Actual tariffs into effect: both China and the United States imposed on $50 billion worth of imports a 25 percent tariff. The goods interested by the United States tariff are capital goods and intermediate goods, like machinery, mechanical appliances, and electrical equipment, the consumer goods barely touched. The goods subjected to the Chinese retaliation tariffs are transportation: vehicles, aircraft, but also vegetables (soybeans). (See Figure 1 and 2).

2.3.2 SECOND STAGE

In September 2018, the United States announced 10 percent tariffs on $200 billion worth of Chinese goods that go into effect on September 24th. The list has been modified from the one published in July as a retaliation against Chinese tariffs, but the higher focus on the consumer's goods remained, with a 24 percentage. Trump announces that it will increase to 25 percent on January 1st, 2019.

The day after, China retaliates by imposing tariffs from 5 to 10 percent on $60 billion of United States imports.

24th September 2018: The United States ($200 billion) and the China ($60 billion) tariffs announced on September 17th and September 18th go into effect. The imports from China would be subjected to a 10 percent tariff, which will increase to 25 percent on January 1st, 2019. The United States imports tariffs from China would range from 5 to 10 percent.

End of the second stage. Of the imports targeted by the United States' second stage, 50 percent are intermediate goods, like computers and auto parts, 25 percent are capital goods, but 24 percent are consumer goods. The Chinese tariffs are mainly on intermediate goods (67 percent), little on capital goods (7 percent). (See Figures 3 and 4)

2.3.3 THIRD STAGE

After the G-20 meeting in Buenos Aires in December, China and the United States achieve a truce on the trade war and the planned increases in tariffs that were expected in January 2020, are postponed. Nonetheless, according to the Trump Administration, if no agreement regarding forced technology transfer, intellectual property protection, and cyber-intrusion is reached by March 1st, 2019, the 10 percent tariffs would be raised to 25 percent.

This increase in tariff would be delayed once again in February.

2019

In a sudden reversal, during the United States-China trade negotiations, President Trump stated that the United States would increase the 10 percent tariff on $200 billion of Chinese goods, to 25 on May 10th. The reason being that China reneged upon already agreed deals. He also indicated that he would shortly impose 25 percent tariffs on $325 billion of United States imports from China. This would be the rest of United States imports from China not yet targeted with Section 301 tariffs. The next tariff escalation would hit consumer goods: toys, clothing, footwear.

10th May 2019: The imports from China that were previously hit by a 10 percent tariff under the September 2018 action are now subject to a 25 percent rate.

1st June 2019: China raised retaliatory tariffs on $60 billion worth of United States goods on an average of 21 percent.

Differently from the United States, China decided to reduce tariffs on competing products imported from all other countries among 2018, from 8 percent to an average of 6,7 percent. China also extended an auto tariff reduction, happened in January 2019, to United States exporters, that could have been saw as part of the trade truce of December 2018. But then the raise in tariffs in May and the will to impose new tariffs on other goods established by the United States, signed that this deal turned out to be premature of almost a year.

In August, Trump said on Twitter that an additional 10 percent (not 25 percent as he threatened in May) tariff will be imposed on the "remaining $300 billion of goods", going into effect September 1st, 2019. Included in the list, as already mentioned, final consumers' goods.

With another August tweet, the Trump administration planned to impose $112 billion worth tariffs on September 1st, but to delay the additional, not yet imposed $160 billion to December

15th, to avoid harming American customers during the retail shopping season. The September tariffs hit, among other things, shoes and clothing, the December tariffs would hit consumer electronics. While earlier tariffs hit only the 29 percent of final goods, the September duties expand it to 69 percent. For what concerns the December tariffs, which would never be applied, some sectors such as toys, footwear, electronics and machinery would have reached the total coverage, and in general, almost 96 percent of United States imports would have been affected by Trump's tariffs.

23 August 2019: "*China releases its plan to retaliate on $75 billion of US exports, effective September 1 and December 15, 2019, in response to Trump's forthcoming tariffs on $300 billion of Chinese goods. The most significant change is that China will increase its average tariff on US autos from 12.6 to 42.6 percent. Later the same day, Trump said he would apply a 15 percent tariff, not 10 percent, on the $112 billion list on September 1 (includes clothing, shoes, other back-to-school items) and the $160 billion list on December 15 (includes toys, consumer electronics). He also said the current 25 percent tariff on $250 billion of Chinese goods will increase to 30 percent, starting October 1*"[19]

In September it becomes possible to see the beginning of a truce: China announces the exemption of 16 American product types from the retaliatory tariffs for 1 year (less than $2 billion of US exports) and Trump announced he would delay the tariff increase on $250 billion of Chinese goods, from 25 percent to 30 percent, from October 1st to October 15th.

In October Trump announced that the United States and China had reached a "first phase deal", so he canceled the October tariffs.

Later, also the scheduled December 15th tariffs were cancelled from both countries and an initial deal was announced, the legal text to be signed in January 2020.

[19] https://www.piie.com/blogs/trade-investment-policy-watch/trump-trade-war-china-date-guide

2.4 SUMMARY

The first Chart summarizes all the most important events concerning the tariff war and shows the trend of the average tariff rate in relation to the main events.

The first six months of 2018 featured only a moderate increase on tariffs. In this period the only tariffs that were actually put into effect were the one on the solar panels and washing machines (defined as US Section 201 tariffs), the one on the steel and aluminum (Section 232) and the corresponding Chinese retaliation tariffs. According to the Executive office of the president "*U.S. goods and services trade with China totaled an estimated $737.1 billion in 2018. Exports were $179.3 billion; imports were $557.9 billion. The U.S. goods and services trade deficit with China was $378.6 billion in 2018."*[20].

Relying on the distribution of solar panel imports in the United States made by the U.S. energy information administration[21], the photovoltaic module import shipments by China is less than 8%. Knowing that the global safeguard tariffs approved by President Trump on solar panels and washing machines covers $8,5 billion of the first and $1,8 of the latter, the Chinese solar panels imports hit by the tariffs are no more than $650 million. According to the investigation of the U.S. International Trade Commission, China exported $425 million of washers to the United States.[22]

For what concerns the tariffs on steel and aluminum, China faced tariffs on $1,1 billion on steel and $1,8 on aluminum, for a total of $2,9 billion.

It is not surprising that the tariff rate didn't grew substantially, considering that the sum of the washing machines, the solar panels, the steel and the aluminum covers only the 1% of Chinese imports.

In a similar way, for what concerns the Chinese retaliatory tariffs for US Section 232 tariffs, it covers the US exports for $2,4 billion, not much more than the 1%.

[20] https://ustr.gov/countries-regions/china-mongolia-taiwan/peoples-republic-china#

[21] https://www.eia.gov/renewable/annual/solar_photo/pdf/pv_full_2018.pdf

[22] https://www.usitc.gov/publications/safeguards/pub4745.pdf

The months of July through September 2018 had a sharp tariff increase in both sides: China average tariff increased from 7,2 to 18,3 percent, and United States average tariff increased from 3,8 percent to 12 percent.

That's the effect of two stages of tariffs combined:

United States' Section 301 tariffs on $34 billion in June, plus the $16 billion in August, and on the other side the similar retaliation tariffs imposed by China.

The September's tariff on $200 billion goods, imposed from United States, and the retaliatory tariff on $60 billion imports by China.

From then it follows eight months when the tariff rate stabilized, there was in fact no important changes in tariffs during that period, until June 2019. United States' Section 301 tariffs on $200 billion increased from 10 to 25 percent, and the retaliation on some United States' product by China. And with the tariff of September 2019 of 15% on $112 billion of Chinese imports, and China's retaliation on $75 billion of United States' exports, the latest phase of tariff increases rate kicks in, to peaks higher the 20 percent for both countries.

With the September tariffs, more than two-third of consumer goods imported from China are subject to tariffs, as shown in Chart 2, and if the 15 percent tariffs planned for 15th December, that affect $160 billion products, would be taken in action, almost all of the United States' import from China would become affected by the tariffs and the tariff rate would rise over 25 percent.

On the other hand, China's tariffs have been affecting less than $80 billion of United States exports, since most of the tariff increases apply to products that China has already hit, so the product coverage of the Chinese retaliation is less then 60%. It could expand on December 15th, but it would remain less than 70%. One of the contributing factors a such little amount of goods covered by the retaliating tariffs, could be the fact that, besides increasing the tariff rate on United States' exports, China reduced tariffs on the competing products imported from everyone else to an average of 6,7 percent (from an average tariff of 8 percent).

The first Chart was updated last on October 11th, before it was known that the December tariffs would not be implemented. The second chart offers a summary dated 19th December, which includes not only the fact that the tariffs have been called off, but also the reduction to 7,5 percent of the 15 percent tariffs imposed on September 2019, even if the timing of the cut is yet to be determined.

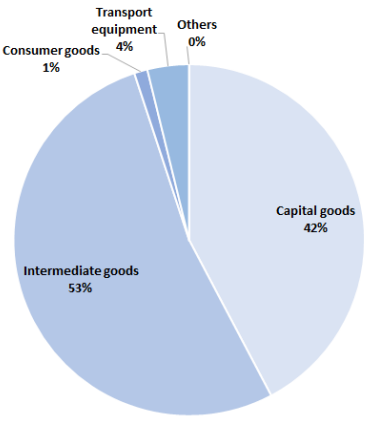
There is no difference between the two charts except for the last period: the expected tariff reduction will not reduce the share of imports affected by Trump's tariffs, so the imports covered by the tariffs will remain the same, around 64,5 percent.

The last two Charts (4 and 5) show the composition of goods covered by the tariffs.

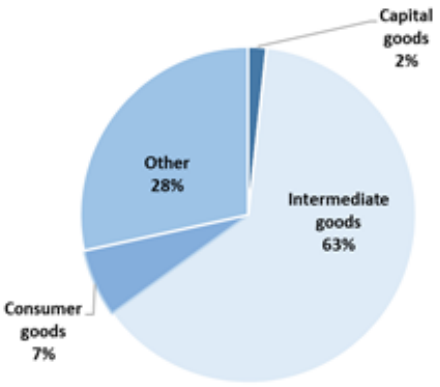
Figures:

Figure 1 (left): US import from China subject to $50 billion of section 301 tariff, by type

Figure 2 (right): Chinese import from the United States subject to China's $50 billion list



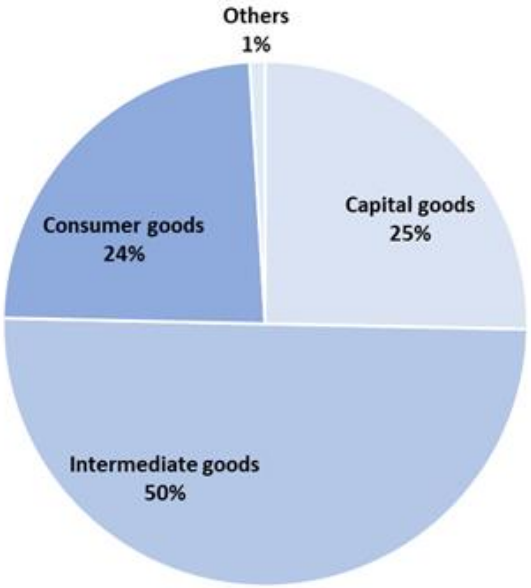
Note: Harmonized System [HS] 8-digit tariff code is converted to Broad Economic Categories (BEC) code, using the correspondence table at https://unstats.un.org/unsd/trade/classifications/correspondence-tables.asp.
Sources: USITC Dataweb. Others include BEC 7 (Health, pharmaceuticals, education, cultural, sport), 12 and 32 (services in food and beverages, and services in construction, wood, glass, stone, metals, housing and furnitures)



Note: Harmonized System [HS] 8-digit tariff code is converted to Broad Economic Categories (BEC) code, using the correspondence table at https://unstats.un.org/unsd/trade/classifications/correspondence-tables.asp. Others include BEC 7 (Health, pharmaceuticals, education, cultural, sport), BEC 12 (Services in food and beverages), BEC 32 (Services in construction, wood, glass, stone, metals, housing and furnitures), and BEC 51 (Transport equipment).

Figure 3 (left): US import from China subject to $2000 billion of section 301 tariff, by type Sep 17

Figure 4 (right): Chinese import from the United States subject to China's $60 billion list



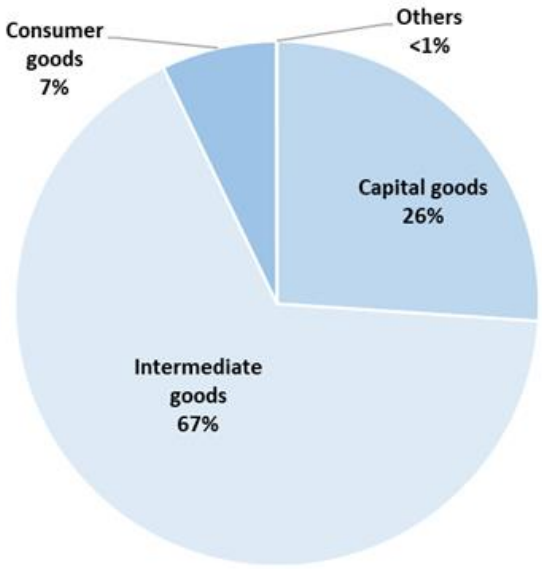


Figure 5 (left): Trump's tweet on 5 May 2019

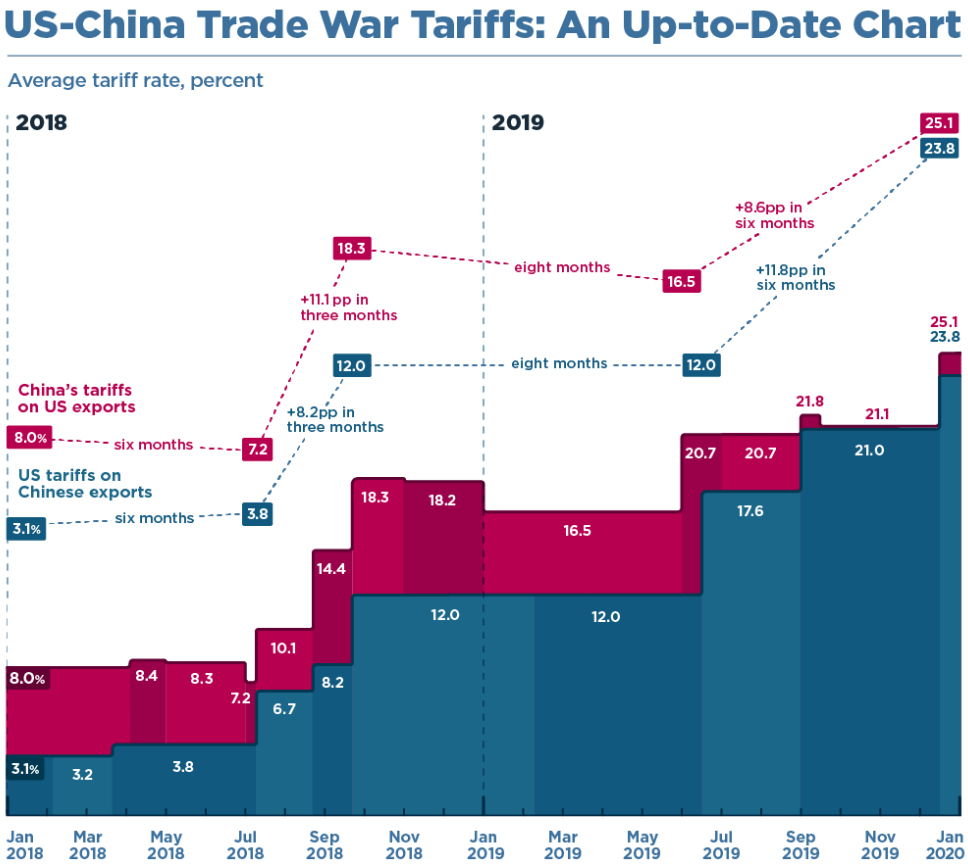
Figure 6 (right): Trump's tweet on 1 August 2019

Figure 7 (left): Trump's tweet on 23 August 2019

Figure 8 (right): Trump's tweet on 11 September 2019

Charts:

Chart 1:



2018

February 7
US Section 201 tariffs on solar panels and washing machines

March 23
US Section 232 tariffs on steel and aluminum

April 2
China's retaliation to US Section 232 tariffs

May 1
China's MFN tariff cut on pharmaceuticals

July 1
China's MFN tariff cut on consumer goods, autos, and IT products

July 6
US Section 301 tariffs ($34 billion) and China's retaliation ($34 billion)

August 23
US Section 301 tariffs ($16 billion) and China's retaliation ($16 billion)

September 24
US Section 301 tariffs ($200 billion) and China's retaliation ($60 billion)

November 1
China's MFN tariff cut on industrial goods

2019

January 1
China suspends retaliation against US autos and parts (Section 301) and reduces MFN tariff rates for 2019

February 8
US Section 201 tariffs reduced on solar panels and washing machines in second year of policy

June
US Section 301 tariffs (10% to 25% increase on $200 billion, effective June 15) and China's retaliation on some US products (subset of $60 billion, June 1)

July 1
China's MFN tariff cut on IT products

September 1
US Section 301 tariffs (15% on subset of $300 billion) and China's retaliation on some US products (subset of $75 billion)

September 17
China implements product exclusions on less than $2 billion of US exports from $34 billion and $16 billion lists

December 15
US Section 301 tariffs (15% on subset of $300 billion) and China's retaliation on some US products (subset of $75 billion) and re-imposition of suspended retaliatory tariffs on autos and parts

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PIIE

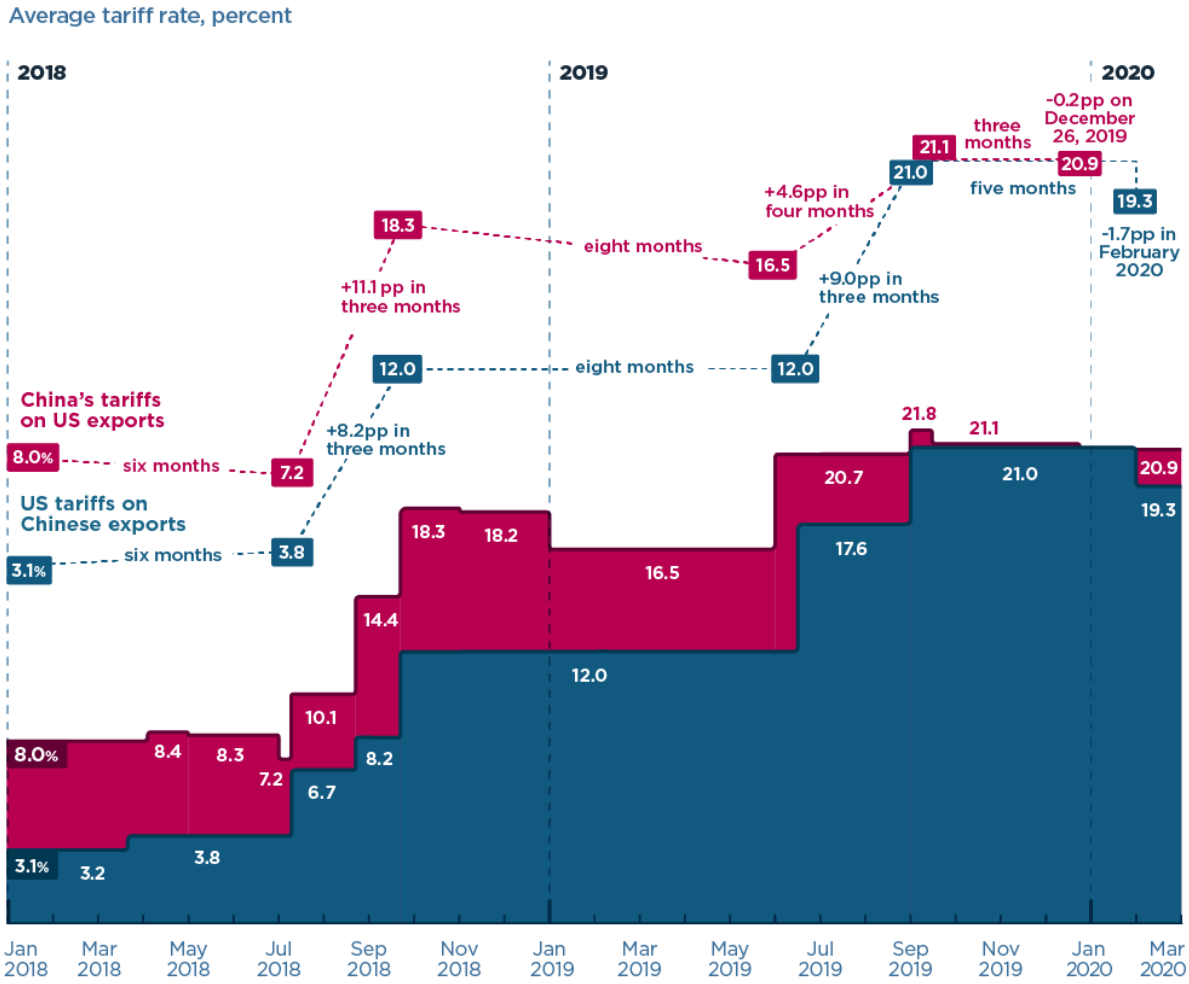
pp = percentage point; MFN = most favored nation

Note: Trade-weighted average tariffs computed from product-level (6-digit Harmonized System) tariff and trade data, weighted by exporting country's exports to the world in 2017.

Source: Updated on October 11, 2019, using data from Chad P. Bown's blog post, "US-China Trade War: The Guns of August."

Chart 2:

Phase one deal only slightly reduces average US tariff on imports from China



PIIE

pp = percentage point

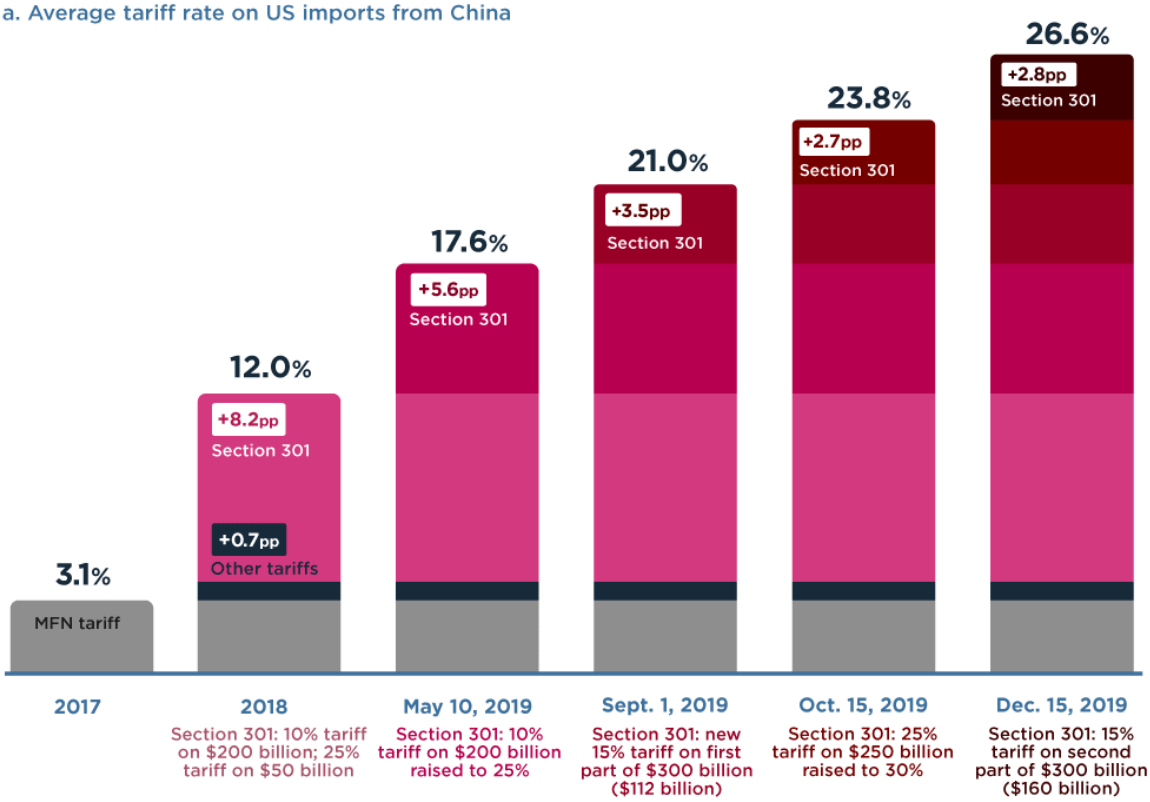
Note: Trade-weighted average tariffs computed from product-level (6-digit Harmonized System) tariff and trade data, weighted by exporting country's exports to the world in 2017.

Sources: Updated on December 19, 2019, from Bown (2019). Constructed by the author with data from Trade Map and Market Access Map (International Trade Centre, marketanalysis.intracen.org) and US Trade Rrepresentative announcement.

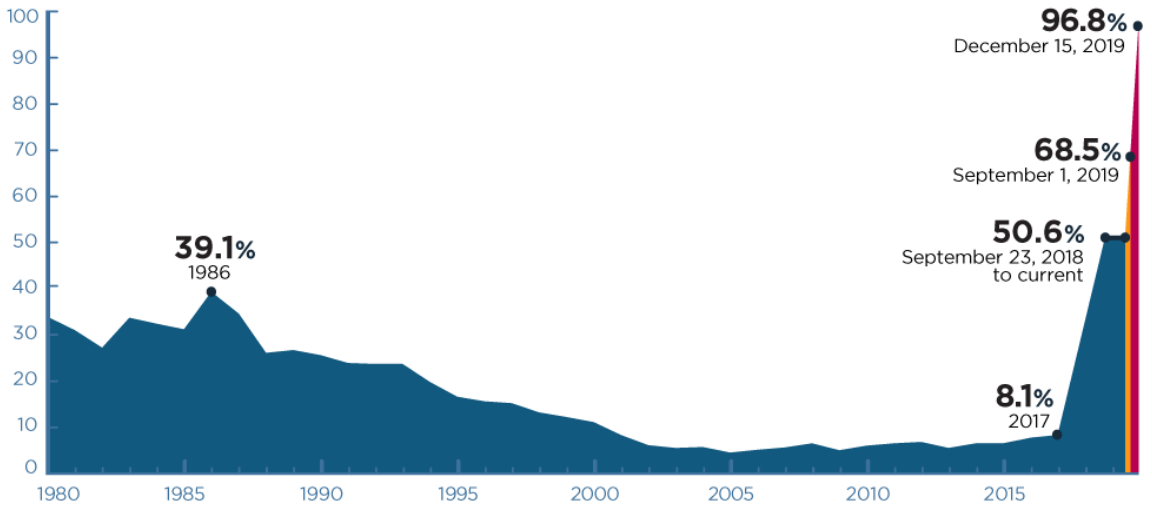
Chart 3:

Trump's new plan will push average tariffs on China above 26 percent by December 15, covering 96.8 percent of imports from China

a. Average tariff rate on US imports from China



b. Percent of US imports from China covered by special trade protection



PIIE

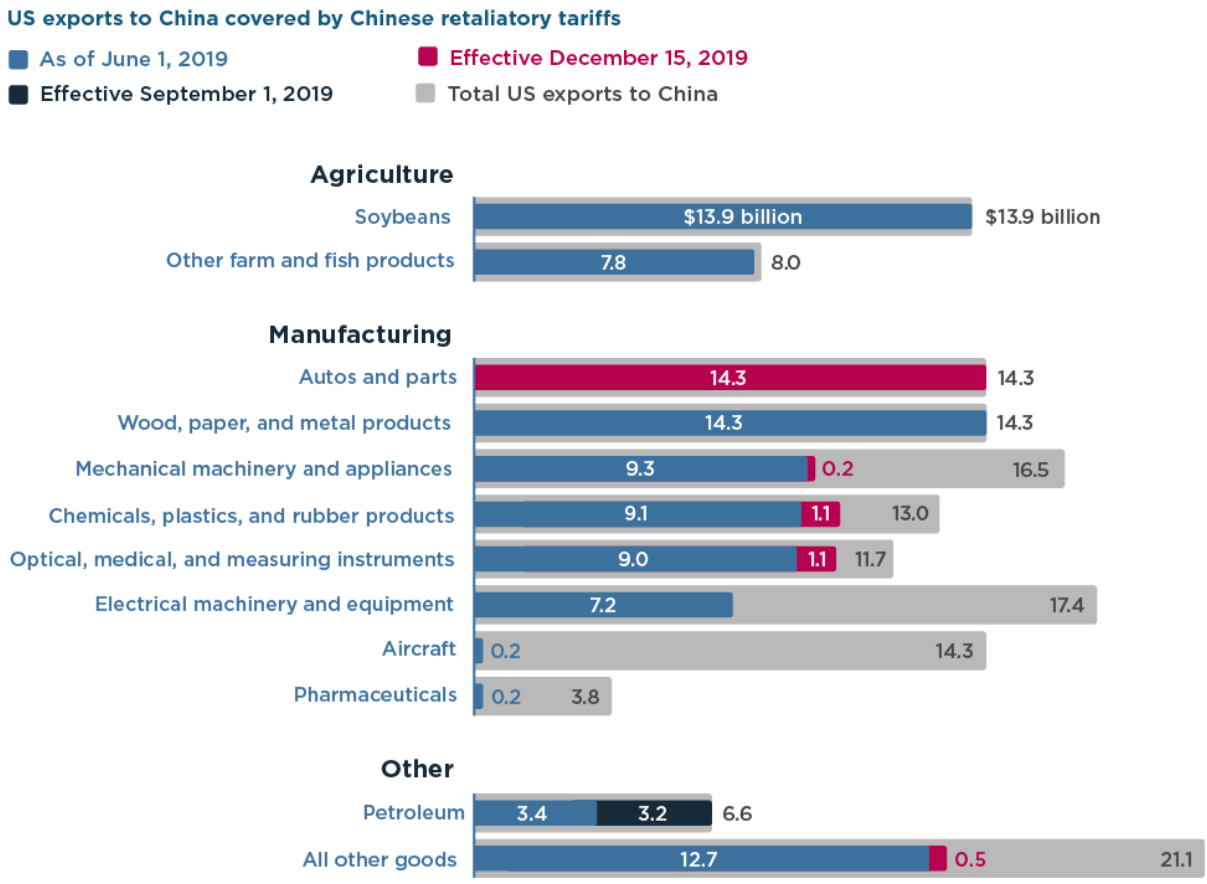
pp = percentage points; MFN = most favored nation

Note: Other tariffs include steel (+0.6pp), solar (+0.2pp), aluminum (+<0.1pp), and washing machines (+<0.1pp). Trade-weighted average tariffs computed from product-level tariff and trade data, weighted by China's exports to the world in 2017. Special trade protection includes tariff and nontariff protection under Section 301, 232, 201, antidumping and countervailing duties, and other forms of voluntary export restraints.

Source: Updated on September 11, 2019, from Bown (2019).

Chart 4:

Amount of US exports to China covered by Chinese retaliatory tariffs by sector, billions of dollars



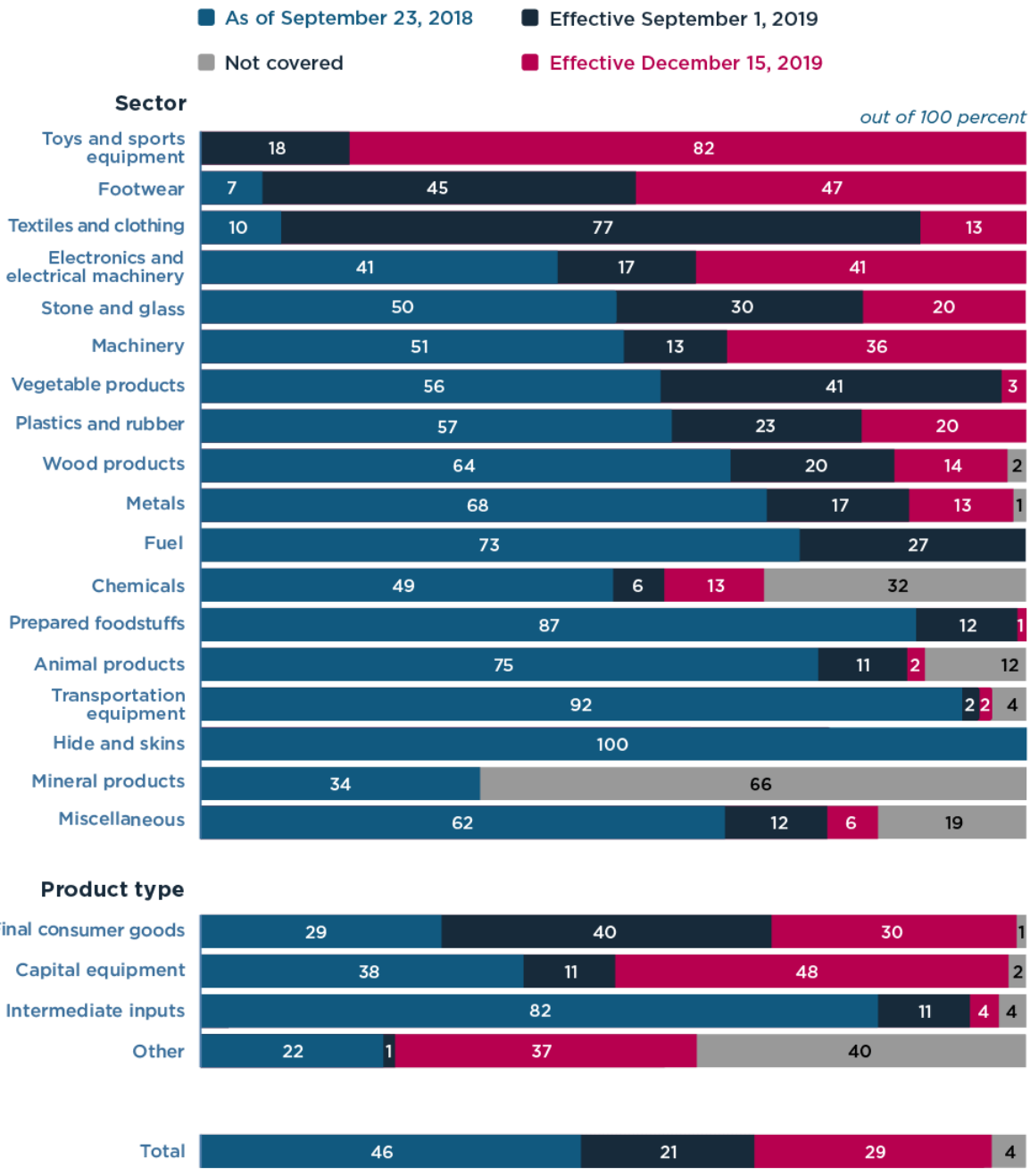
PIIE

Sources: Updated on August 23, 2019, from Bown, Jung, and Zhang (2019). Constructed by the author with data on China's 2017 imports from Trade Map (International Trade Centre, marketanalysis.intracen.org) and China's Ministry of Finance's announcements.

Chart 5:

Consumer goods, especially toys, footwear, and clothing, will see biggest increases in tariff coverage by December 15

Percent of US imports from China subject to Section 301 tariffs



PIIE

Note: Numbers may not sum to 100 due to rounding.

Source: Updated on August 23, 2019, from Bown (2019).

CHAPTER THREE

3. THE IMPACT OF THE TRADE WAR

As written in the first chapter, imposing tariffs is a bad idea.

It ends up decreasing the consumer's surplus by raising the prices of imported goods, encouraging the buyers to shift from lower-cost foreign sources to higher cost domestic sources.

It represents also a problem for the industries which see the price of the intermediate or capital products they need, rising; this can affect negatively the income and the wages, not to mention the fact that these higher business costs will be partially shifted once again onto consumers. This could be the case of tariffs on steel, for example.

Sure, it can help to decrease unemployment, but, as told before, better methods exist for doing that without imposing the drawbacks of a tariff on the country. It would also be short-sighted to say that tariffs create jobs, considering that it would help the production and employment only in the protected industries. Other sectors could be negatively afflicted, the jobs in the export sector would decline, as tariffs end implying a tit-for-tat game. The retaliatory tariffs from the other country have to be taken into account in advance.

"Overall, for every dollar gained by domestic producers, domestic consumers lose more than a dollar."[23]

It's also very important to consider not only the "mechanical impact" of tariffs but also the uncertainty that such a policy can generate about the outlook for global trade. The uncertainty curtails the economic activity around the world: the customers would be less confident in spending, firms could be reluctantly working in countries following this path, and it is well known the negative impact of uncertainty in investments.

In a bilateral trade war, the results can get complicated, and there are many direct and indirect forces coming into play.

[23] https://cals.ncsu.edu/agricultural-and-resource-economics/wp-content/uploads/sites/12/2018/03/Economist-Grennes-May-June-2017.pdf

Tariffs will affect the world prices. For a country which is external to the tariff war it could be convenient to trade with the interested countries, but it should also be considered the uncertainty aspect, so it might want to divert trade around the warring countries. The dimensions of the trade shares of the countries imposing tariffs are also strictly related to changes in world prices.

There would be introduced changes in the real exchange rate, and all countries will shift their import countries and the destination of their export, reacting to bilateral trade. Trade diversion imposes costs associated with drifting markets.

High-productivity supply chains could get harmed by a trade war, and countries could switch to less productive ones.

Also, the most productive sectors could shift in response to changes in tariffs, and in that case, it would mean reallocating capital across sectors, which is costly.

Intersectoral linkages have to be considered, the effect of tariffs will reverberate to all sectors because of the traded intermediate inputs.

In this chapter, some papers and articles will be exposed in order to try to achieve a complete view of what are, and what could be the effect of this trade war on the United States, the Chinese and the world's economy.

3.1 THE PAPERS

The following is a list of the referenced papers of the chapter, accompanied by the names of who wrote them, the publication date and a short description of the data and the methods of analysis used by their authors.

"*Long-Run Effects on Chinese GDP from U.S.-China Tariff Hikes*", published in June 2019, by John K. Ferraro and Eva Van Leemput, underlines some short-medium-term effects of the tariff policy which has been already addressed, like the negative effects on consumption and investment, the disruption of supply chains and the delaying in investment and hiring. It then offers a view on the long-run effects: the slowing of accumulation of capital and the shifting of resources from productive sectors into less productive sectors, the reduced extent of competition, or the interference with the technological advance.

With a focus on the long-run effects, the paper gives an interesting point of view on the effects of the tariffs on Chinese GDP, on United States GDP and the effect on countries not directly involved in the tariff increases.

The model used to analyze the impact of the recently implemented and proposed tariffs is a "*trade model developed by Caliendo and Parro (2015), which builds on the seminal model of trade and geography of Eaton and Kortum (2002) to include multiple tradable and non-tradable sectors, input-output linkages, and global imbalances."*[24] The countries included in the analysis are 30, and the sectors are 40, equally divided between tradable, and non-tradable.

"*US-China Trade War: Both Countries Lose, World Markets Adjust, Others Gain*", it was published in November 2019, by Sherman Robinson and Karen Thierfelder. It tries to predict a three to five years scenario in which the US, China, and the rest of the world have adjusted. It then shows the short-term impact of the tariff war among the United States, China, and other

[24] Ferraro, John K., and Eva Van Leemput (2019). "Long-Run Effects on Chinese GDP from U.S.-China Tariff Hikes," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, July 15, 2019, https://doi.org/10.17016/2380-7172.2382.

countries on the GDP, imports, exports, and analyses separately the impact on the economic sectors of the United States and China.

In the first scenario, it takes into account the tariffs already adopted, (Since June 2019, when the article was written) that totals to $250 billion of Chinese goods and on $110 billion of United States goods of imposed tariffs.

In the second scenario, it would add the tariffs that at the time the article was written were only proposed: the increase to 30 percent on the first $250 billion of imports and the addition of a 15 percent tariff on "the remaining $300 billion". The 15 percent tariff has been applied in September on a subset of $112 billion goods, but the 30 percent increase has been delayed, also the other subset of $160 billion that would have hit on December 15, has been canceled.

The analysis is carried out using a Computable General Equilibrium (CGE) simulation model of the global economy called GLOBE. This type of model is used for analyzing the impacts of changes in trade policy. This model includes 16 countries and 42 sectors.

"*The Return to Protectionism*" by Pablo D. Fajgelbaum, Pinelopi K. Goldberg, Patrick J. Kennedy, and Amit K. Khandelwal, with the last draft on 12 October 2019, analyzes the short-run impact of what it calls "the return to protectionism", on the United States economy. Some of those impacts have already been addressed by some other papers like the declines in imports and exports and the response of the prices for the foreign exporters that did not fall, implying a complete pass-through of tariffs to duty-inclusive prices.

"Shooting oneself in the foot? Trade war and global value chains" is written by Cecilia Bellora and Lionel Fontagné, and was published on the 10 of April 2019. The paper addresses the trade and welfare effects of the trade tensions by relying on a Computable General Equilibrium model named MIRAGE, which differentiates the demand of goods according to them being intended for final or intermediate consumption, and then tracing the impact along the value chains. The results are expressed as variation with respect to the baseline in 2030.

"*The impact of the 2018 Trade War on U.S. prices and welfare*" by Mary Amiti, Stephen J. Redding and David Weinstein, was published on the second of March 2019, for the Centre for Economic Policy Research. It underlines how the trade war, during the 2018, brought an increment in prices of both intermediate and final goods, changes in the supply-chain network,

the reduction of availability of imported goods and the passing through of the tariffs into the prices of the imported goods, with a reduction in U.S. real income of $1.4 billion per month by the end of 2018.

The last paper and last article are included in order to underly the importance of the impact of the trade uncertainty deriving by the trade policy

"*How trade policy uncertainty affect global economic activity?"* by Dario Caldara, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo.

"Are tariff worries cutting into business investment?" by David Altig, executive vice president, and research director in the Atlanta Fed's Research Department; Nick Bloom, the William D. Eberle Professor of Economics at Stanford University; Steven J. Davis, the William H. Abbott Professor of International Business and Economics at the Chicago Booth School of Business and a senior fellow at the Hoover Institution; Brent Meyer, a policy adviser and economist in the Atlanta Fed's Research Department; and Nick Parker, the Atlanta Fed's director of surveys, published the 8 of August on the Federal Reserve of Atlanta blog.

3.2.1 THE IMPACT ON THE GDP

The first paper, "*Long-Run Effects on Chinese GDP from U.S.-China Tariff Hikes*", underlines a mechanism which is really important in order to understand the impact of the tariffs on the GDP: higher United States tariffs on imports from China raises the prices of the intermediate goods. This would lower the United States' own productivity and GDP. The same happens in China, tariffs decrease demand for the products in which the country is more productive and lowers the GDP by pushing the resources into the less productive sectors. For what concerns other countries, they could gain by trade diversion but at the same time they could lose as China and the United States push resources into less productive sectors.

This is underlined by the results of the paper, even if the impact of the implemented tariffs found by the paper is limited: -0,25 percent on Chinese GDP and -0,19 percent on the United States' GDP. The result can be seen in the first table, together with a scenario in which the proposed tariff would have got into effect (We now know that it didn't happen) and the impacts would have been exacerbated. The bilateral trade would be then reduced by more than 50%, the GDP would fall by 0,39 percent for China and by 0,31 percent for the United States, which admittedly is still not a large effect.

Figure 1 shows the estimated impact on real GDP of other countries. As preannounced, generally the spillovers are negligible, since if they gain from U.S. import diversion, they are negatively affected by the lower Chinese demand. Some countries gain because they intercept the United States import demand, like Mexico; countries that are more dependent on Chinese demand would face lower exports and lower GDP, like New Zealand or South Africa.

The second paper, "*US-China Trade War: Both Countries Lose, World Markets Adjust, Others Gain*" analyzes the effects of the tariffs on the United States', Chinese and the rest of the world's GDPs, in a similar way to what the previous paper did. In this way, it is possible to get a vision on both the large and the small period.

The papers' views have in common the fact that they consider the effects of these tariffs in terms of GDP not so relevant. For what concerns the U.S. GDP it's between -0,02% (first scenario) and -0,07% (second scenario) in the short-period. The Chinese GDP is considered to be positively affected in the short run, but only between 0,02 percent and 0,01 percent. This is probably due to the combined effect of a less impact on intermediate goods, which China has

decided especially to exclude as much as possible from tariffs, and the fact that China was abler than the United States in building different trade relations, and to divert its exports to other countries. Apparently, this small effect tends to be canceled in the long-run, where the effect of pushing resources into less productive sectors tend to prevail.

The third paper, "*The Return to Protectionism*" obtained that the resulting losses to U.S. consumers and firms who buy imports were $51 billion, or 0.27% of GDP, but after accounting for tariff revenue and gains to domestic producers, the aggregate real income loss was estimated to be $7.2 billion, or 0.04% of GDP. The fourth table represents the "aggregate impacts". According to the paper, the aggregate impact can be divided into three components, namely EVM, EVX, and the tariff revenue, which are inserted in the first three columns. EVM is the increase in the duty-inclusive cost of the pre-war import basket, EVX is the increase in the value of the pre-war export basket, and then there is the change in the tariff revenue. The first row reports the monetary equivalent on an annual basis at 2016 prices and the second row reports numbers relative to GDP. The first column, which reports EVM, shows that U.S. buyers of imports lost in aggregate $51 billion (0.27% of GDP). The second column shows the EVX increase of $9,4 billion (0,05% of GDP). The final component is the increase in tariff revenue. The effects approximately balance out, leading to a small aggregate loss for the United States as a whole, as it is possible to see on the last column of the table, that sums the three components of the EV to obtain the aggregate impacts of the war on the United States economy. The estimated result is an aggregate loss of $7,2 billion, or 0.04% of GDP (value based on the 2016 GDP).

The estimate of the short-run of the PIIE paper ranges from a value that does not consider all tariffs, to a value that considers too many tariffs, from 0,02 percent to 0,07 percent. The 0.04 percent value instead is relative to only the 2018 tariffs (which still are the majority) but considers also the retaliatory tariffs of other countries, so this GDP loss estimate is consistent with the previously measured one.

A similar value is also estimated by the paper *"The impact of the 2018 Trade War on U.S. prices and welfare"*: the cumulative deadweight welfare cost (reduction in real income) from the U.S. tariffs is around $6.9 billion during the first 11 months of 2018, with an additional cost of $12.3 billion to domestic consumers and importers in the form of tariff revenue transferred to the government (that is not accounted as a loss but as a transfer).

Losses in the GDP, with some variations among the estimates, are expected by all the papers, it is true that the impact is expected to be limited.

Including all the estimates it would range from -0,02 and -0,07 percent in the short-run and -0,19 percent on the United States' GDP. The second paper expects the Chinese GDP to rise in a short period, but in the long run, it would be hit in a negative way, with the highest estimate of -0,25 percent of GDP.

About the intermediate goods, Figure 6 from "*Shooting oneself in the foot? Trade war and global value chains"* reports the impacts on US bilateral trade flows with major trading partners, distinguishing between trade in final and intermediate products. It is observed a massive cut in the United States imports of intermediate inputs from China (a -43 percent drop). Regarding final goods, the import of United States from China is -28 percent, it's well known, in fact, the attempt of the United States to disrupt value chains while limiting the cost of trade war beard by the customers. The United States imports diversify their origin, to the benefit of the other countries. The Chinese cut in imports from the United States is more limited: -31 percent cut in intermediate goods, -24 percent for final goods. "*The increase in producer costs in the US is detrimental to the competitiveness of United States producers and translates into price increases and losses of market shares on export markets. This adds to the consequences of retaliation by China and other affected countries. […] These results confirm the theoretical intuition that trade wars are costly for all trading partners jointly involved in global value chains."*[25]

[25] *"Shooting oneself in the foot? Trade war and global value chains" by Cecilia Bellora and Lionel Fontagné. 10 April 2019.*

3.2.2 THE EFFECT ON EXPORTS AND IMPORTS

According to "*Long-Run Effects on Chinese GDP from U.S.-China Tariff Hikes*" Chinese exports to the United States would be reduced by 33%/159 billion. This is due to the tariffs rising prices for United States consumers (or for the producers) and the consequent reduction in the demand. The Chinese imports from the United States would be -43%/-58 billion, less than the reduction in China's exports to the United States, because China implemented fewer tariffs than its rival (approximately half). The negative effects are mitigated by China diverting the exports to other countries and by the United States by diverting import demand to other countries.

The long-run impact is suggested to be limited. The spillover to the other countries can generally be considered positive for the trade diversion, but it brings a negative effect: the fact that China and the United States would push resources into less productive sectors whose goods would otherwise have been imported. The paper "*US-China Trade War: Both Countries Lose, World Markets Adjust, Others Gain"* states that other countries could benefit from the trade war, but it is possible to see that this advantage is not that relevant if we look at the long-run. Interesting thing is that Mexico, which is the country that benefits the more, according to the last paper, is the worst performer in this one. In the long-run Mexico could gain by substituting China as United States' importer, whether in the short-run it would prevail the fact that its economy is linked to the United States, so its exports would decline along with the one of the U.S.

That's the explanation from the short-run paper, "*US-China Trade War: Both Countries Lose, World Markets Adjust, Others Gain": "For the United States, both total exports and total imports decline under all scenarios. China, however, can successfully divert its exports away from the United States, expanding in other markets and increasing total exports. A chain reaction is then set in motion: China increases exports to Europe and countries in East and Southeast Asia, which in turn increase their exports to the United States. The United States is less able to divert its exports and change sources of imports, many of which are part of supply*

chains that are difficult to relocate. There is a complex mix of direct and indirect effects at work, with different impacts on the two economies. Global trade declines slightly."[26]

The terms of trade worsen for both countries, because of the rising import prices. The other countries see their terms of trade rising, probably because of an increment in export prices.

Figure 2 shows the percent change in real exports from country to country. The results are: a decline in both exports from United States to China and from China to United States (from United States to China it ranges from -7,32 percent to -14,38 percent and the exports from China to the United States it ranges from -5,61 percent to -10,69 percent), also a decline in the general exports for the United States (-0,33 percent in the first scenario and -0,86 percent in the second scenario) and an increase in general exports for China (again, 0,51 percent in the first, and 0,86 percent in the second scenario). This last phenomenon is due to the fact that even though the export with the United States largely declined, China managed to rise the exports to other countries by lowering their relative tariffs, where the United States decline is spread among all regions.

For what concerns other countries, they generally gain from the bilateral tariff war between China and the United States. There could be some exceptions, as saw in the previous paper, but the general trend is that they benefit from the trade diversion. Trade diversion means that trade is diverted from a more efficient exporter towards a less efficient one by entering a free trade agreement or, like in our case, by the imposition of tariffs to a country. The total cost of goods becomes cheaper when trading within the agreement because of the low tariff, in our case it becomes cheaper relative to the country that has been exposed to the tariff. The effect is to make Chinese goods more expensive than previously. Therefore, the United States consumers switched from some of the imports from China to other countries, prices rose for consumers, and demand fell. Consumers tend to lose out because they pay higher prices from the less efficient producer, and so the producers do. The situation is different for China, following the country's choice of the goods that should have been targeted by the tariffs the prices for consumers rose, but the producer's price remained equal.

Adding the results from the papers, United States exportations to China declines between -7,32 percent and -14,38 percent in the short run and -43 percent in the long-run. -33 percent is the reduction of the exportations from China to the United States in the long run and -5,61 percent

[26] Sherman Robinson., and Karen Thierfelder. "*US-China Trade War: Both Countries Lose, World Markets Adjust, Others Gain*". Peterson Institute for International Economics. November 2019

and -10,69 percent is the one in the short run. The long-run effects are, predictably, the short-term ones that grew bigger.

To see the impact of the tariffs on the imports of the goods interested by it, it is useful to introduce another paper: "*The impact of the 2018 Trade War on U.S. prices and welfare*". Figure 8 shows the total value of imports: a surge in the imports just before implementation, and a steep decline in import values after the imposition of tariffs. For what concerns washing machines and solar panels, the run-up in imports was probably due to the importers moving forward import orders in order to obtain the products before the imposition of the tariffs, but also the imports on the remaining goods appeared to be rising a little on average. The drop in the imports following the imposition of the tariffs was between 25 and 30 percent. The imports in unaffected sectors and countries rose over the same period, which could reflect some important substitutions from affected to unaffected countries in response to the tariff changes.

"*The return to protectionism*" is another paper with a focus on the impact on prices and many results regarding varieties. The concept of variety is reported also in the paper *"The impact of the 2018 Trade War on U.S. prices and welfare*": imported and domestic varieties of goods are not perfect substitutes, so the increases in trade barriers can reduce welfare by restricting consumer's ability to purchase new imported varieties. In that paper, the imposition of tariffs is associated with a drop in the number of imported varieties entering the United States. Here it is defined as country-product pairs, and regarding their imports, the large declines are confirmed, import values decline on average by 20 percent and quantities by 23 percent. This can be seen both in the fourth figure (a) and in the first column of the second table.

3.2.3 THE IMPACT ON PRICES

The paper "*US-China Trade War: Both Countries Lose, World Markets Adjust, Others Gain"* affirms that for the United States, increased tariffs are paid by US consumers. The effect consists in an increase of prices and a decrease of the demand. Producers see a rise in the cost of imported intermediate inputs, damaging competitiveness. For the Chinese instead, the tariffs raise the prices of consumer goods but have a less direct impact on producers, since the Chinese have exempted some intermediate inputs.

The paper "*The impact of the 2018 Trade War on U.S. prices and welfare*" has already been nominated before about the impact on prices: it is possible to see in figure 9, the evolution of the prices in relation to the tariff waves, suggesting that the tariffs were passed on to U.S. importers and consumers. The price index used in the paper takes into account the import shares from the countries and the sectors in the twelve months from 2018 among the HTS10 import goods in the categories affected by each tariff wave. The six "waves" involve the tariffs imposed in 2018 which have been mentioned over and over (but with the addition of one wave: the tariffs imposed to Canada, Mexico, and European Union). The result is that the goods untouched by the tariffs show a "flat" price index, so whatever price movements observed in protected sectors, are likely due to the tariffs. The prices of the goods subjected to tariffs rose from ten to thirty percent.

Obviously, if the United States government wants to gain something from the trade war, at least some of the tariff costs must be absorbed by the foreign exporters. From what it is possible to see by the previous analyses, apparently, most of the tariff costs are shifted onto domestic prices, and so are born by the consumers. This is confirmed by an ulterior analysis, the results are shown in Table 5, which tries to capture the impact on the prices received by foreign exporters in relation to a tariff. An estimate of tariffs on the unit value of -0,003 is obtained, suggesting that the tariff changes had little-to-no impact on the foreign exporters' prices. The dependent variable was then replaced, first by a 12-month change in imported quantities and then by the import values. Regarding to the quantities of the imports, one percentage point increase in tariffs is associated with a six percentage points fall in import quantities. The result is similar between quantities and imported values, which is consistent with the earlier finding of no discernible effect on the prices received by the foreign exporters. The imported values

fall by 6,5 percent for a one percentage point increase in tariffs. Also, if the foreign exporters would have been lowering the pre-tariff prices that they charge for the goods hit by tariffs, some evidence would have been founded of an improvement in the terms of trade, which is not the case.

Trying to understand the impact on firms and consumers, the paper focuses also on the markup, specifically, on two kinds of markup:

The first markup is due to tariffs changing the pricing behavior of United States producers by protecting them from foreign competition and enabling them to raise prices and markups. It is known of course, that as a foreign firm enters the market, as a response domestic firms drop prices and markup (output tariff).

The second markup is due to the effect of the raise of the intermediate goods (input tariff).

A coefficient of 1.8 is obtained on the weighted input tariff, and there is a clear cost-push channel of the tariffs that causes domestic producer prices to rise because their input costs have risen. Concerning the competition effect of tariffs in the coefficient on output tariffs, domestic producers raise their prices when their foreign competitors are forced to raise prices due to higher tariffs, as signaled by the coefficient of 0.49 on the adjusted output tariff change.

By looking at the United States export values (Table 6) it is possible to see a similar trend: there is no decrease in the United States exporter's prices in response to the retaliatory foreign tariffs, this means that the foreign importers and consumers are bearing the rise in prices of these goods. However, this does not mean that U.S. exporters are not being affected by the retaliatory tariffs: a ten percent foreign tariff is associated with a 32 percent decline in the value of U.S. exports.

The paper "*Return to protectionism*" focuses on variety-level imports: Table 2 reports the responses of the United States variety-level imports to the tariff changes. Specifically, the results of regressing the four outcomes -values (p*m), quantities (m), unit values (p*) and the duty-inclusive unit values (p)- on the tariffs. The decline in import values is matched by a decline in quantities. The third column indicates no impact of tariff increases on before-duty unit values, this regression suggests a pass-through of tariffs on the United States economy, consistently with the figure 4 (b): the before-duty unit values do not change and the duty-inclusive unit values increase sharply, the tariffs are passing-through to import prices.

Similar to what has already been seen in the paper before, the variety-level exports follow a similar pattern as the one observed by the imports. The value falls by 24 percent and quantities decline by 25 percent at the month of implementation. Another parallelism is the fact that the before-duty unit values do not change in response to the tariffs, suggesting the pass-through of retaliatory tariffs to foreigner's imports of United States varieties.

This can be seen also in the values inside Figure 5 and Table 3 that report the regression of the four variety-level export outcomes on the retaliatory tariffs. Here too, is underlined a decline in both export values and quantities and the lack of evidence that the retaliatory tariffs forced United States exporters to lower before-duty product level unit values. Rather it is implied that the duty-inclusive export prices rose with the tariffs.

3.3 THE IMPACT BY SECTORS

The impact of tariffs can vary from sector to sector, as explained by the papers "*US-China Trade War: Both Countries Lose, World Markets Adjust, Others Gain*", and *"Shooting oneself in the foot? Trade war and global value chains".*

The third figure represents the percentage change in real production, exports, and imports by aggregate sectors in both scenarios. The impacts are similar in both scenarios: for the United States imports fall in all sectors, production and exports fall in all sectors except for low-trade services. Agriculture is hit the hardest. That is the so called "fallacy" at work: tariffs that do not protect the traded sectors like manufacturing and lead to a shift toward nontraded sectors. The non-selective policy adopted, trying to protect all the industries ends damaging the economy, especially agriculture, manufacturing and traded services.

The Chinese situation is the opposite: except for the imports where all sectors shrink, traded sectors expand and low-trade services shrink. This is due to the choice of China to exempt imports of intermediate inputs in order to have less impact on producers. This has proved to be a provident move, the Chinese manufacture sector, in fact, has been spared, its production grew on an absolute level.

The previous paper focused more on the difference between traded and nontraded products, where *"Shooting oneself in the foot? Trade war and global value chains"* goes deeper in analyzing the effects on the single sectors. Figure 7 reports the percentage changes in value-added of the sectors in the United States and China: the upper-right quadrant corresponds to sectors winning in both countries (it is empty). The bottom-right are countries winning in the United States at the expense of China, here the most important sector is Electronics (9 percent decrease in China value-added, 7 percent gain in the United States). In the quadrant where the two countries lose, there is only the Food sector, but for small amounts. The last quadrant is the most populated, here is where the United States lose and China gain. The most hit sector by Chinese retaliation is Oilseeds: -10,5 percent drop, along with it, fiber crops and oath crops and other agricultural sectors.

3.4 THE IMPACT OF TRADE POLICY UNCERTAINTY

"Trade negotiations and proposals for a new approach to trade policy have become the focus of increased attention among investors, politicians, and market participants. While it is possible that negotiations will eventually lead to a more open and fair global competitive landscape, developments so far have resulted in an increase in uncertainty about the outlook for global trade."[27]

As said before, uncertainty can affect investments, hiring, consumer spending, and ultimately economic activity around the world. The evidence of trade policy uncertainty affecting the economic activity is carried out by a study from the Fed: "*How trade policy uncertainty affect global economic activity?"* by Dario Caldara, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo.

The note first documents the rise in trade policy uncertainty, through two complementary measures based on a text-search analysis:

One constructed on articles of seven newspapers, namely: Boston Globe, Chicago Tribune, Guardian, Los Angeles Times, New York Times, Wall Street Journal, and Washington Post. The requirements to be met for an article in order to be selected were the presence of both terms related to uncertainty (such as risk, threat, uncertainty) and terms related to trade policy (tariff, import duty).

The other analyses were based on quarterly earnings call transcripts of U.S.-listed corporations. An earning call is a conference call between the management of a company, analysts, investors, and the media to discuss the company's financial results during a given reporting period.

The results can be seen in figure 10. The two measures share very similar dynamics: Trade Policy Uncertainty reached an initial high in the first half of 2018, and another peak in the first half of 2019.

[27]Caldara, Dario, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo (2019). *"Does Trade Policy Uncertainty Affect Global Economic Activity?,"* FEDS Notes. Washington: Board of Governors of the Federal Reserve System, September 4, 2019, https://doi.org/10.17016/2380-7172.2445.

In Figure 11 it is possible to see how the rise in TPU in 2018 and 2019 went hand in hand with a slowdown in global trade and world industrial production.

To quantify the effect of trade policy uncertainty on economic activity, a monthly vector auto-regression (VAR) was estimated. The shocks to Trade Policy Uncertainty affect contemporaneously the dollar, the stock prices, the credit spreads, the industrial production for the United States, the AFEs (Advanced Foreign Economies), the EMEs (Emerging Market Economies), world imports, and United States import tariffs.

Figure 12 shows in detail the effect of the increase in TPU on the other variables: it lowers industrial production in all regions, world imports and equity prices, the dollar is boosted.

Figure 13 presents the main result. "*The total drag on GDP from the two waves of trade tensions (the black solid lines) is expected to increase through early 2020, cumulating to an impact of just above 1 percent. The effects are similar across the United States, the AFEs, and the EMEs. The blue dashed lines show the effect on the GDP of the first wave of TPU alone."*[28]

Both the aggregate time-series analysis and the cross-sectional evidence suggest that higher trade policy uncertainty has adverse effects on GDP and investment.

[28] Caldara, Dario, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo (2019). "Does Trade Policy Uncertainty Affect Global Economic Activity?," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, September 4, 2019, https://doi.org/10.17016/2380-7172.2445.

Tying the trade policy uncertainty directly to the trade war is the article called *"Are tariff worries cutting into business investment?"*

The survey elicits the expectation of more than 300 firms regarding capital expenditures, employment, sales growth, and costs.

Firms capital investment plans are in fact affected by tariffs and by the fear of more to come. From the raising of domestic investment for the newly protected industries, to the delaying of investment caused by uncertainty, to the negative effects caused by the rise in input costs or the curtailing of the demand for United States exports caused by the retaliatory tariffs.

The survey consists of three questions:

"*Have the recently announced tariff hikes or concerns about retaliation caused your firm to reassess its capital expenditure plans?"* to which one-fifth of the respondents answered positively. The answer could be different among different sectors, those worries are predictably higher for the goods-producing firms (thirty percent in manufacturing) then service-providers (fourteen percent among service-providers). Of course, manufacturing firms are more engaged in international commerce.

"How have recent tariff hikes or concerns about retaliation caused your firm to reassess its capital expenditure plans?" Among the firms that responded positively to the question before, the main form of reassessment is to place planned capital expenditure under review (67 percent), some have postponed or dropped them (22 and 9 percent), some other accelerated their plans (14 percent) and one firm added new capital expenditures (2 percent).

"*How much tariff worries affect your previously planned capital expenditures?"* Among firms reassessing, an average of sixty percent of their capital expenditure plans is affected.

These findings could, at a first view, suggest that tariff worries did not actually affect that much United States business investment. But according to the authors of the article, there are sound reasons for concern.

First, some industries, have been affected by a high percentage, like the thirty percent of manufacturing, so the investment effects of trade policy frictions are concentrated in a sector that accounts for much of business investment.

Second, this article has been published in August 2018, so as it takes into account some threats that were not translated already into effective tariffs, at least in terms of value. Since the tariff

war would have escalated from that point, it is not capturing the highest impact of uncertainty, that could have been higher later on.

3.5 CONCLUSION

This chapter explained the consequences of the trade war for the United States and China and what would they be, by focusing on some macroeconomic indicators such as GDP, exports and imports, and prices. Following, these results will be summed up to offer a general framework of the impacts of this trade war.

The impact on GDP would be negative in the long-run for both countries, with direct effects estimated as -0,25 percent GDP for China and -0,19 percent GDP for the United States. By implementing a persistent increase in tariffs, the prices of the United States' intermediate goods would raise, lowering the production and ultimately the GDP. Chinese GDP would instead be lowered by the reallocation in less productive sectors. This would be caused by the decrease in the demand for the Chinese goods that got hit by the tariffs, since the above-mentioned raise of their prices.

The tariffs could affect global growth in the short-period through different channels: the first is the negative effect in consumption and investment, caused not only by the rising of the prices, but also by the impact of uncertainty, especially for the delaying in investment. (These two themes will be treated separately later). The other channel through which the tariffs effect operates in the short-run is the disruption of supply chains. In the specific case of this trade-war, both countries have to face it, but China manages to limit its impact in a better way, especially with its exports, that were increased towards Europe and countries in East and Southeast Asia. The United States instead, is less able to divert exports and change sources of imports. So, among the short-period, the United States loses, due to the increase in tariffs, from -0,02 percent to -0,07 percent of its GDP. China instead, should manage to prevent this reduction, its GDP in fact, would even rise a little from 0,01 percent to 0,02 percent. The lesser impact on China is due to the two already faced reasons: the fact that it tried to harm the intermediate goods as little as possible, and the fact that it was more able to divert its exports, contrary to its rival.

Speaking of the impact of persistent tariffs on the exports, the results suggest that it would be relevant in the long-run, as in the short-run, as it would be expected by a trade war.

-33 percent of Chinese exports to the United States and -43 percent of Chinese imports from the United States during the long-run. The Chinese exports to the United States would range from -5,61 percent to -10,69 percent in the short-run whether the Chinese imports from the United States in the short-run would be from -7,32 percent to -14,38 percent.

Regarding general exports, in the short term the United States would fall from -0,33 percent to -0,86 percent, and the Chinese instead would rise from 0,51 percent to 0,86 percent. The reason for this rise signals the aforementioned export diversion.

The prices for the goods subject to tariffs rose from 10 to 30 percent. This rise is not only caused by the so called "input tariff", that refers to the cost-push channel of the tariffs that causes domestic producer's prices to rise because their input costs have rose. It is also related to the protection from competition these industries gained, that allows them to rise prices and markup.

The results of various papers seem to agree that the tariffs are paid ultimately by consumers and importers. By looking at the prices for the foreign exporters it is possible to see that they did not lower in response to the tariffs, instead they remained more or less the same, meaning that the rise of prices is passed through importers and consumers. Anyway, the same thing happens for what concerns the retaliatory tariffs that hit United States exporters, with the prices for the exporters kept unchanged and all the tariffs passed though foreign importers and customers.

It may be also interesting to look the sector level, to understand what sectors could be affected the most by the tariffs, and if the impact would be positive or negative. Among the United States, all sectors have been hit negatively by the tariffs, both in terms of production, ad in terms of exportations and importations. The only exception would be low-trade services. There is the "fallacy of composition" at work: broad-based tariffs that attempts to protect many manufacturing industries simultaneously, can hurt manufacturing as a whole, leading to a shift away from traded sectors toward nontraded sectors.

Vice versa for China, where the impact on production, importations and exportations is overall positive except for low-traded services. This result is derived by its decision to exclude tariffs on manufactured goods.

In terms of value-added on the single sectors, the sector that got hit the more by the tariffs is the manufacturing sector for the United States, in addition to the agriculture sector as a whole:

oilseed, fiber crops, cereals vegetable and fruit. For China the most affected sector is the electronics sector, machinery and metal are also affected, but to a lesser extent.

At last, uncertainty. The impact of the uncertainty deriving from the instability of the trade war must not be undervalued, since it is suggested that higher trade policy uncertainty has adverse effects on GDP and investment. Specifically, we underlined before the results of a survey that determined how one-fifth of the sample reassessed its capital expenditure plan because of the worries caused by the tariff war. The main form of reassessment being to place their capital expenditure plan, on average sixty percent, under review.

We saw how the trade war had and would have some undesirable effects among not only the United States and China, but also among the global economy. Negative impacts on GDPs, rise of prices and a decline in global trade, these are the consequences. In the next chapter it will be exposed the phase one deal, the first step towards the end of this trade conflict, with a hope that the situation will develop towards a brighter future.

Tables

Table 1: Cumulative Effect on Real GDP Growth and Trade (from "Long-Run Effects on Chinese GDP from U.S.-China Tariff Hikes")

	China real GDP (pct.) (1)	U.S. real GDP (pct.) (2)	China's exports to the U.S. (pct.) (3)	China's exports to the U.S. (bn USD) (4)	China's imports from the U.S. (pct.) (5)	China's imports from the U.S. (bn USD) (6)
A. Implemented						
1. Solar & washing mch.	-0.00	-0.00	-0.5	-2	-.2	-.3
2. Steel & aluminum	-0.02	-0.01	-0.9	-4	-2	-3
3. Sec. 301 - $50bn	-0.11	-0.10	-14	-67	-25	-34
4. Sec. 301 - $180bn (10%)	-0.17	-0.14	-23	-111	-33	-45
5. Sec. 301 - $180bn (25%)	-0.25	-0.19	-33	-159	-43	-58
B. Proposed						
6. Remaining $275bn (25%)	-0.39	-0.31	-54	-260	-59	-80

Table 2: Variety-level import responses to import tariffs (from "The Return to Protectionism")

	$\Delta \ln p^*_{igt} m_{igt}$	$\Delta \ln m_{igt}$	$\Delta \ln p^*_{igt}$	$\Delta \ln p_{igt}$
$\Delta \ln(1+\tau_{igt})$	-1.52	-1.47	0.00	0.58

Table 3: Variety-level export responses to retaliatory tariffs (from "The Return to Protectionism")

	$\Delta \ln p^X_{igt} x_{igt}$	$\Delta \ln x_{igt}$	$\Delta \ln p^X_{igt}$	$\Delta \ln p^X_{igt}(1+\tau^*_{igt})$
$\Delta \ln(1+\tau^*_{iat})$	-0.99	-1.00	-0.04	0.96

Table 4: Aggregate Impacts (from "The Return to Protectionism")

	EV^M	EV^X	ΔR	EV
	(1)	(2)	(3)	(4)
	2018 Trade War			
Change ($ b)	-51.0	9.4	34.3	-7.2
Change (% GDP)	-0.27	0.05	0.18	-0.04

Table 5: Impact of U.S. Tariffs on Importing (from "THE IMPACT OF THE 2018 TRADE WAR ON U.S. PRICES AND WELFARE")

	$\Delta\ln(p_{ijt})$	$\Delta\ln(m_{ijt})$	$\Delta\ln(p_{ijt}\times m_{ijt})$	$\Delta\ln(p_{it}\times m_{it})$
$\Delta\ln(1+\text{Tariff}_{ijt})$	-0.003	-6.026	-6.466	-3.757

Table 6: Impact of Foreign Tariffs on U.S. Exporting ("THE IMPACT OF THE 2018 TRADE WAR ON U.S. PRICES AND WELFARE")

	$\Delta\ln(p_{i\text{US}t})$	$\Delta\ln(m_{i\text{US}t})$	$\Delta\ln(p_{i\text{US}t}\times m_{i\text{US}t})$
$\Delta\ln(1+\text{Tariff}_{ijt})$	0.083	-3.459	-3.898

Figures

Figure 1: The spillover to other countries (from "Long-Run Effects on Chinese GDP from U.S.-China Tariff Hikes")

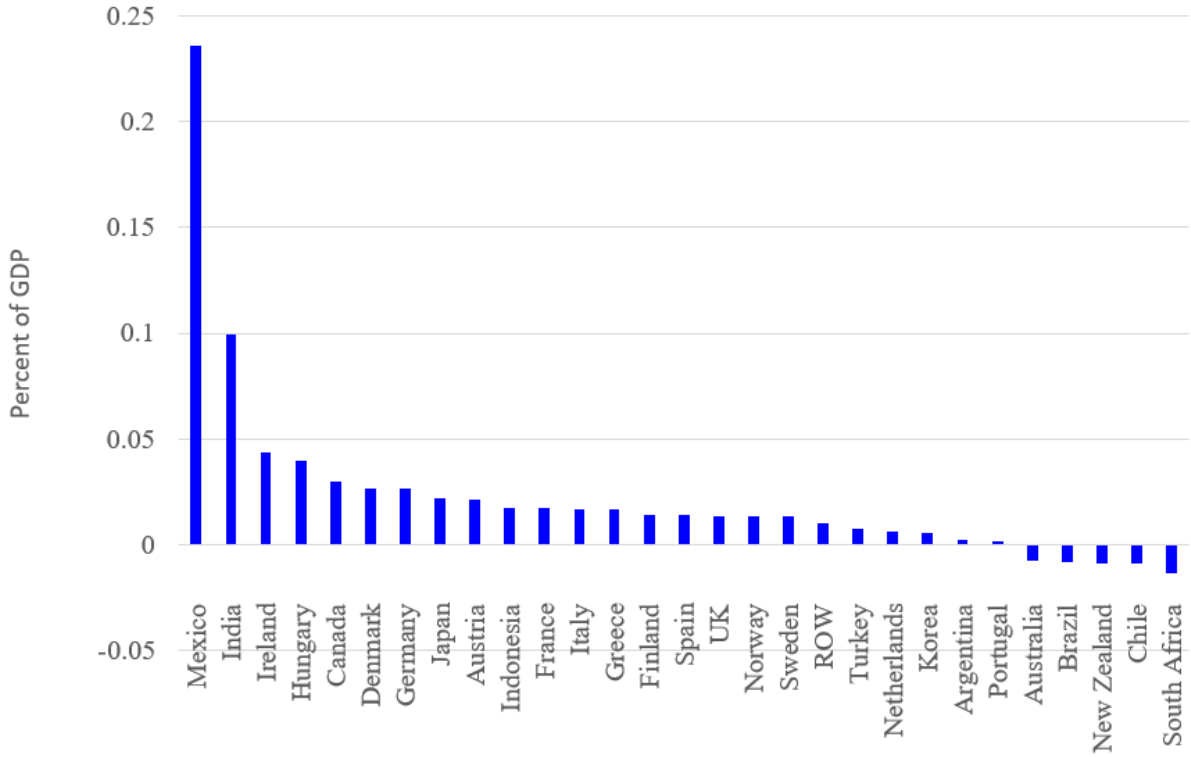


Figure 2: (from "US-China Trade War: Both Countries Lose, World Markets Adjust, Others Gain")

Impact of tariffs on real exports

a. Scenario 1: June 2019

Exporting country/region	Destination country/region (percent change in real exports)											
	NAFTA		Europe		East and Southeast Asia		All Other		Total		United States	China and Hong Kong
United States		0.41		0.19	-1.94			0.20	-0.33		0.00	-7.32
Canada		0.19	-1.11		-0.89		-1.28		-0.24		0.23	-0.29
Mexico	-0.16		-2.41		-2.44		-2.10		-0.65		-0.06	-2.63
Europe		1.31	-0.10		-0.54		-0.16		-0.02		1.51	-0.98
China and Hong Kong	-4.59			2.26		2.05		2.42		0.51	-5.61	1.49
Japan		2.30	-0.50		-0.86		-0.51		-0.16		2.57	-1.03
South Korea		1.70	-0.35		-0.54		-0.37		-0.14		2.02	-0.55
Other high-income Asia		1.54	-0.32		-0.36		-0.32		-0.12		1.82	-0.24
Low-income Asia		0.55	-0.16		-0.27		-0.19		-0.12		0.61	-0.04
Central America		0.25	-0.22		-0.44		-0.33		-0.08		0.28	-0.70
Latin America	-0.07		-0.85			0.54	-0.48		-0.21		0.04	1.58
India	-0.04		-0.17			0.04	-0.22		-0.12		-0.05	0.69
Africa		0.18	-0.18		-0.15		-0.20		-0.09		0.21	-0.03
Russia		0.26	-0.08		-0.13		-0.11		-0.07		0.28	-0.11
Middle East and North Africa		0.21	-0.06		-0.12		-0.08		-0.06		0.21	-0.31
Other countries	-2.50			0.49		0.37		0.13	-0.18		-3.07	0.70
All countries	-0.15			0.02	-0.22			0.13	-0.05		-0.33	-0.85

b. Scenario 2: December 2019

Exporting country/region	Destination country/region (percent change in real exports)											
	NAFTA		Europe		East and Southeast Asia		All Other		Total		United States	China and Hong Kong
United States		0.69		0.08	-4.12			0.31	-0.86		0.00	-14.38
Canada		0.24	-1.51		-1.37		-1.64		-0.35		0.31	-0.84
Mexico	-0.21		-3.36		-3.19		-2.96		-0.89		-0.02	-3.18
Europe		1.89	-0.19		-0.61		-0.24		-0.04		2.21	-0.89
China and Hong Kong	-8.77			4.62		3.63		4.20		0.86	-10.69	2.71
Japan		2.68	-0.68		-1.03		-0.70		-0.23		3.14	-1.15
South Korea		2.57	-0.49		-0.83		-0.52		-0.21		3.17	-0.91
Other high-income Asia		2.92	-0.44		-0.63		-0.30		-0.13		3.44	-0.68
Low-income Asia		3.07	-0.72		-0.82		-0.51		-0.19		3.56	-0.76
Central America		1.22	-0.89		-1.31		-0.91		-0.08		1.40	-2.03
Latin America		0.07	-1.04			0.44	-0.60		-0.28		0.24	1.55
India		2.00	-0.78		-0.53		-0.72		-0.17		2.20	0.02
Africa		0.50	-0.33		-0.43		-0.29		-0.15		0.56	-0.36
Russia		0.52	-0.10		-0.33		-0.12		-0.10		0.56	-0.42
Middle East and North Africa		1.10	-0.23		-0.30		-0.16		-0.07		1.19	-0.75
Other countries		2.16	-0.94		-0.53		-0.56		-0.20		2.67	-0.19
All countries	-0.30			0.06	-0.44			0.26	-0.09		-0.59	-1.64

Figure 3: (from "US-China Trade War: Both Countries Lose, World Markets Adjust, Others Gain")

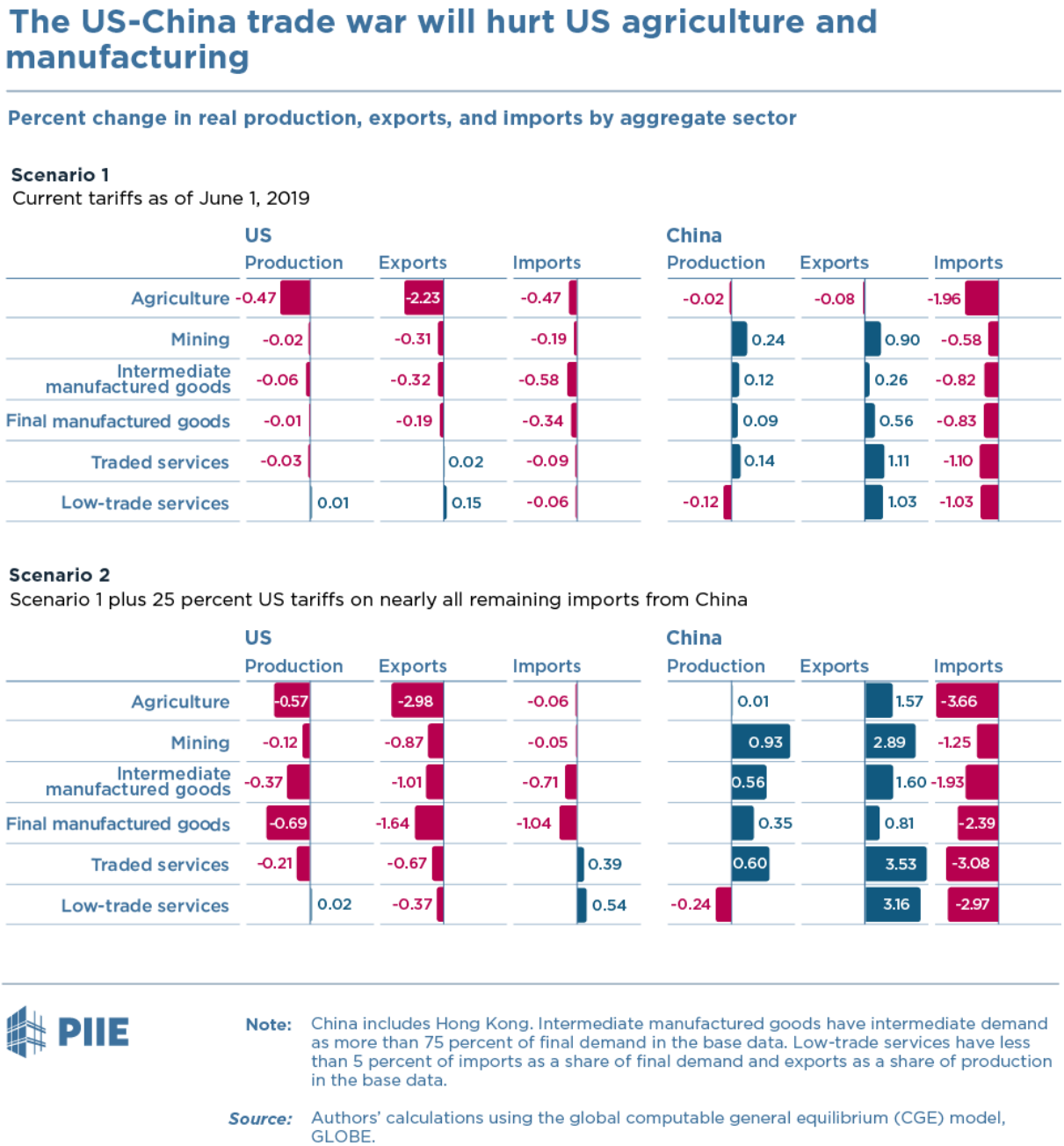


Figure 4: Variety Event Study: Imports (from "The Return to Protectionism")

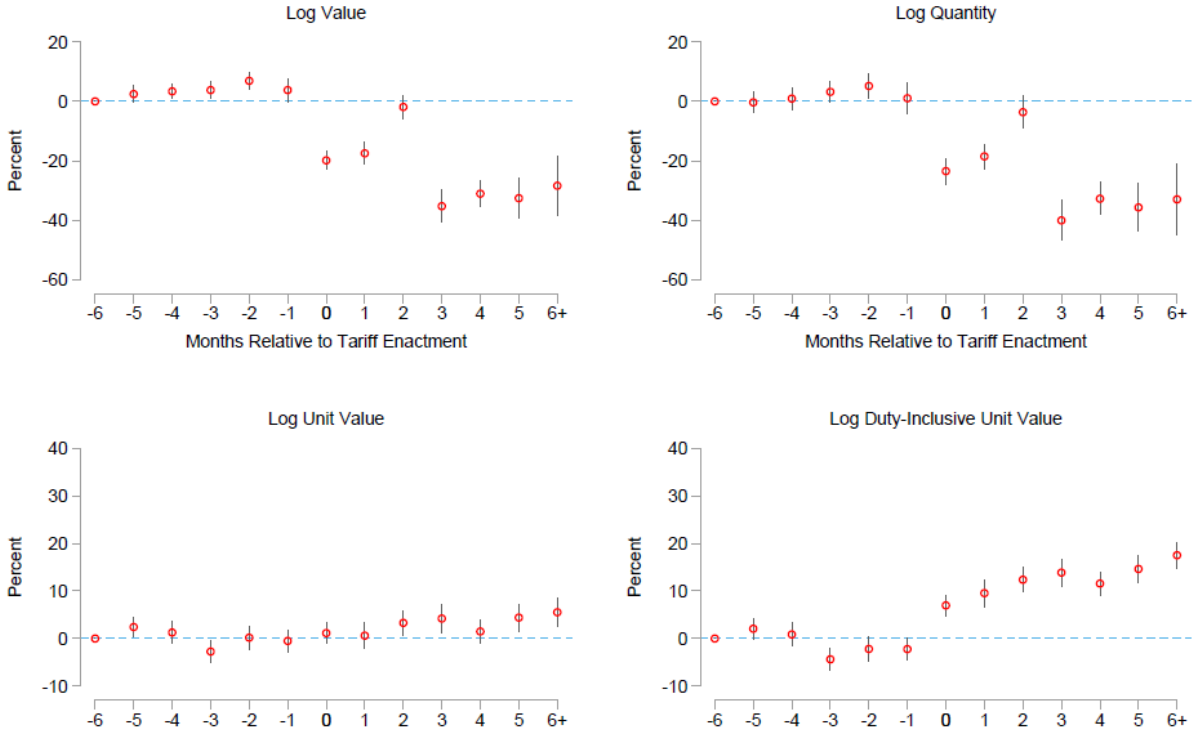


Figure 5: Variety Event Study: Exports (from "The Return to Protectionism")

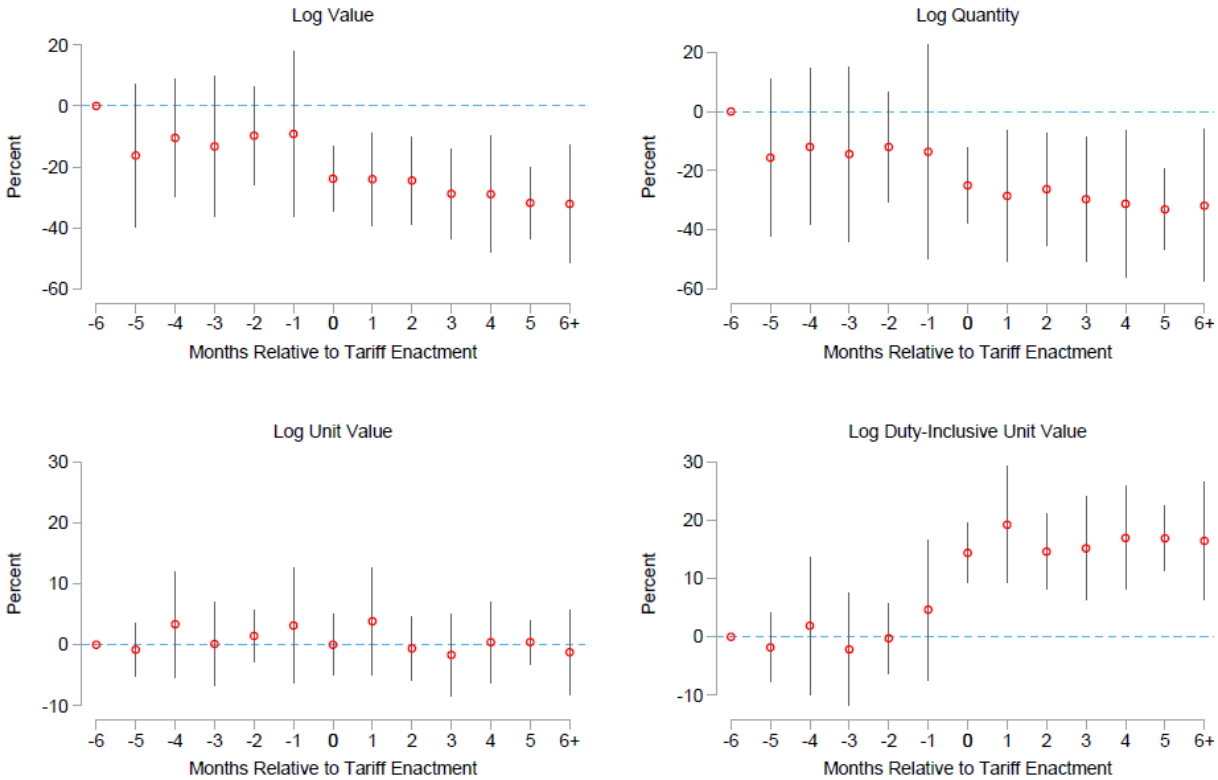


Figure 6: Impact on United States trade flow (from "Shooting oneself in the foot? Trade war and global value chains")

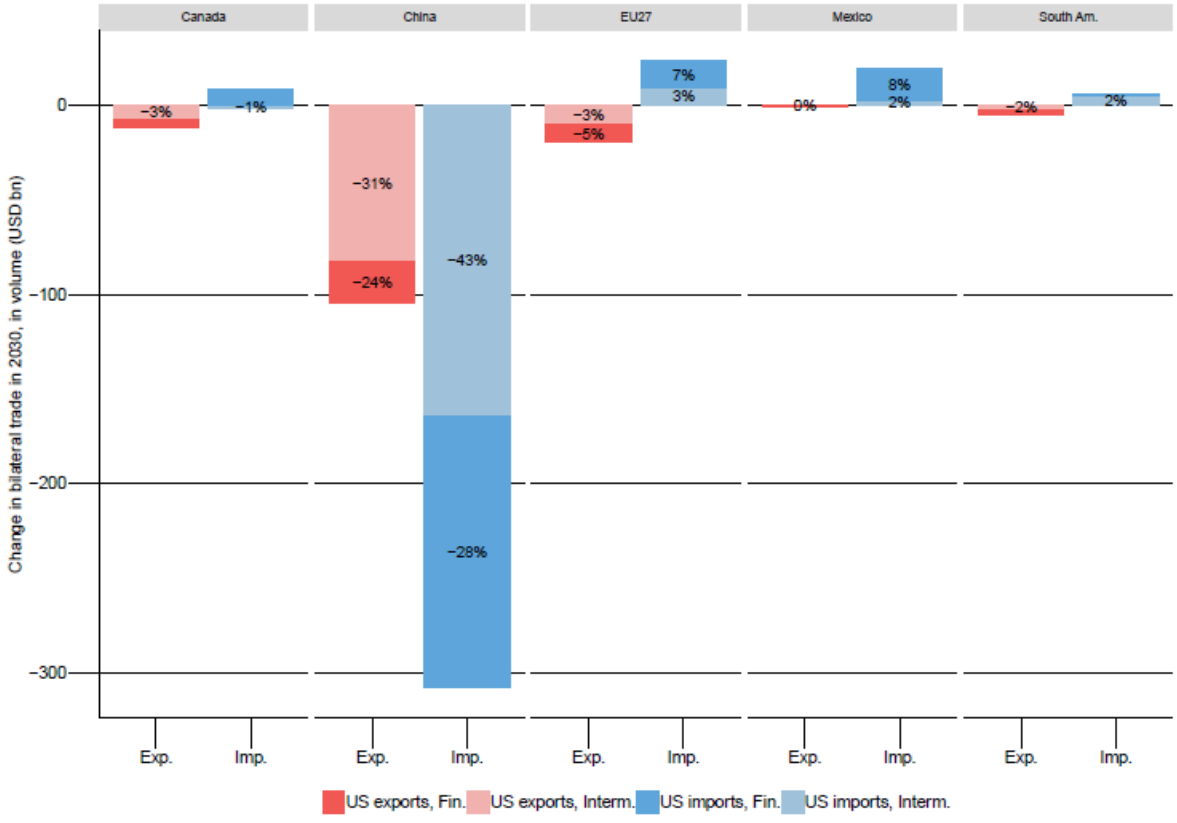


Figure 7: Relative changes in value-added, by sector, in 2030 (%)) (from "Shooting oneself in the foot? Trade war and global value chains")

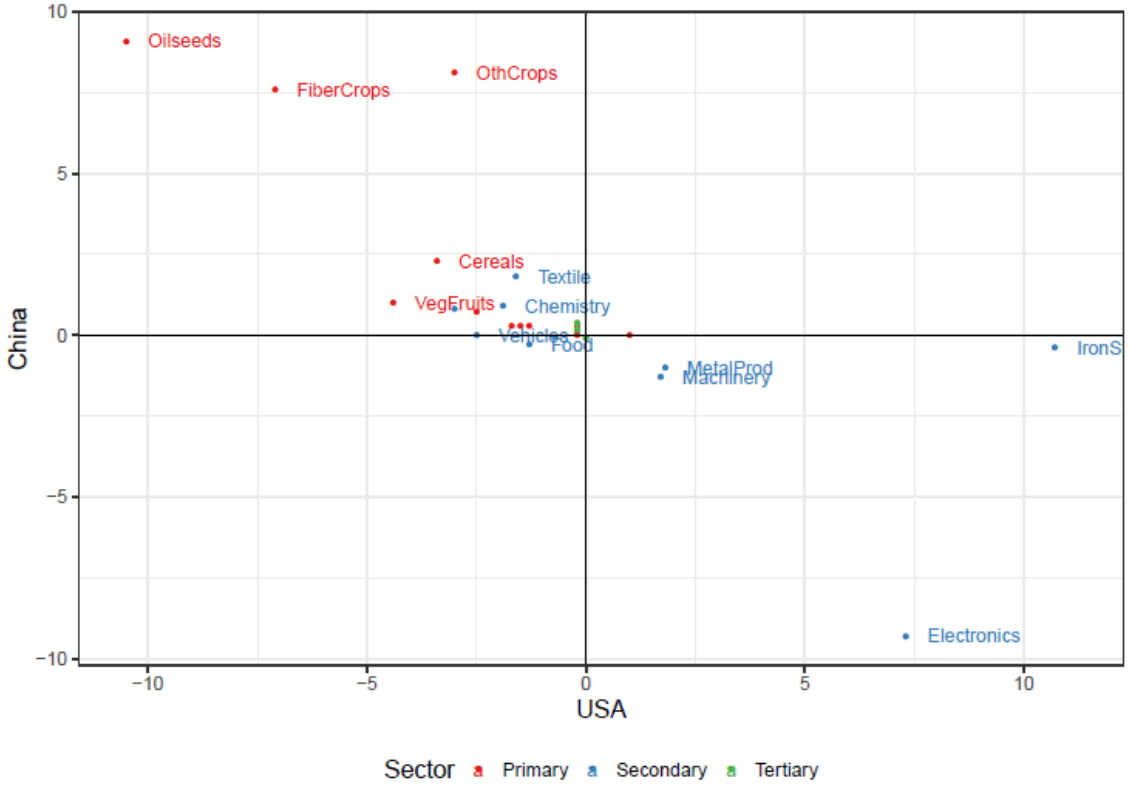


Figure 8: 12-month Proportional Change in Import Prices by Tariff Wave "THE IMPACT OF THE 2018 TRADE WAR ON U.S. PRICES AND WELFARE"

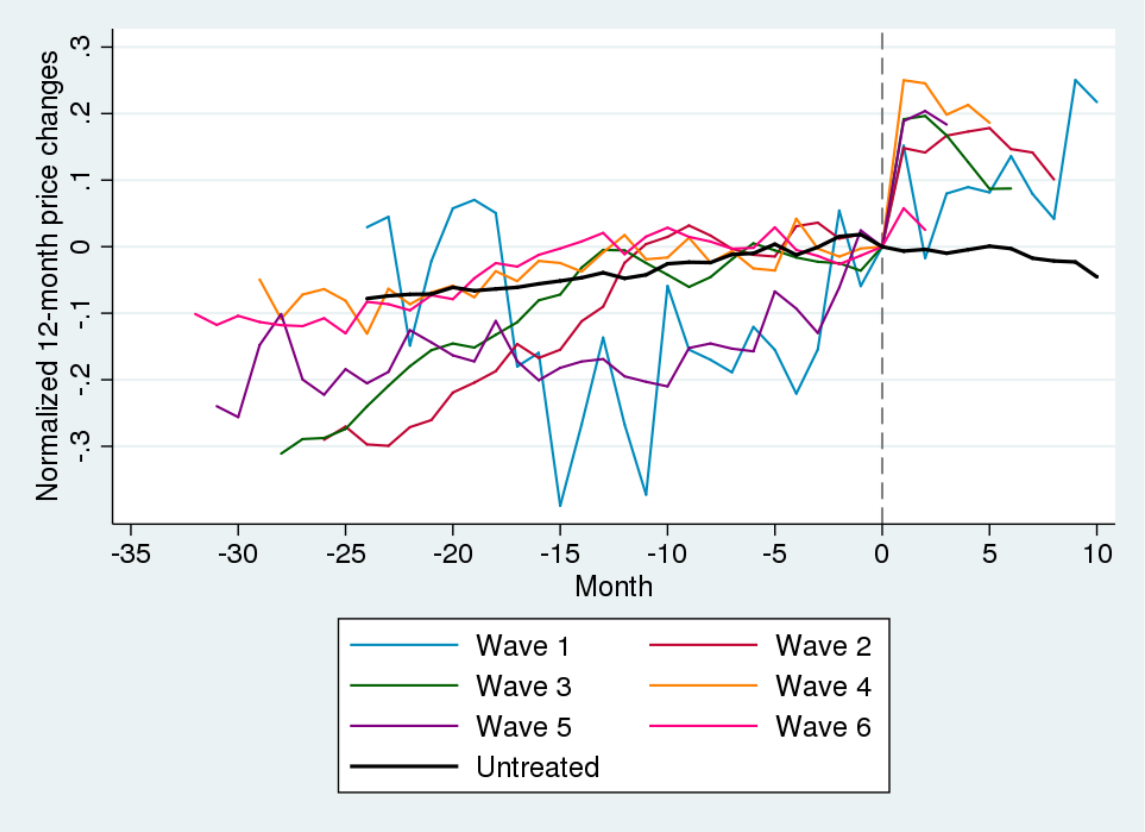


Figure 9: Total Import Values by Tariff Wave "THE IMPACT OF THE 2018 TRADE WAR ON U.S. PRICES AND WELFARE"

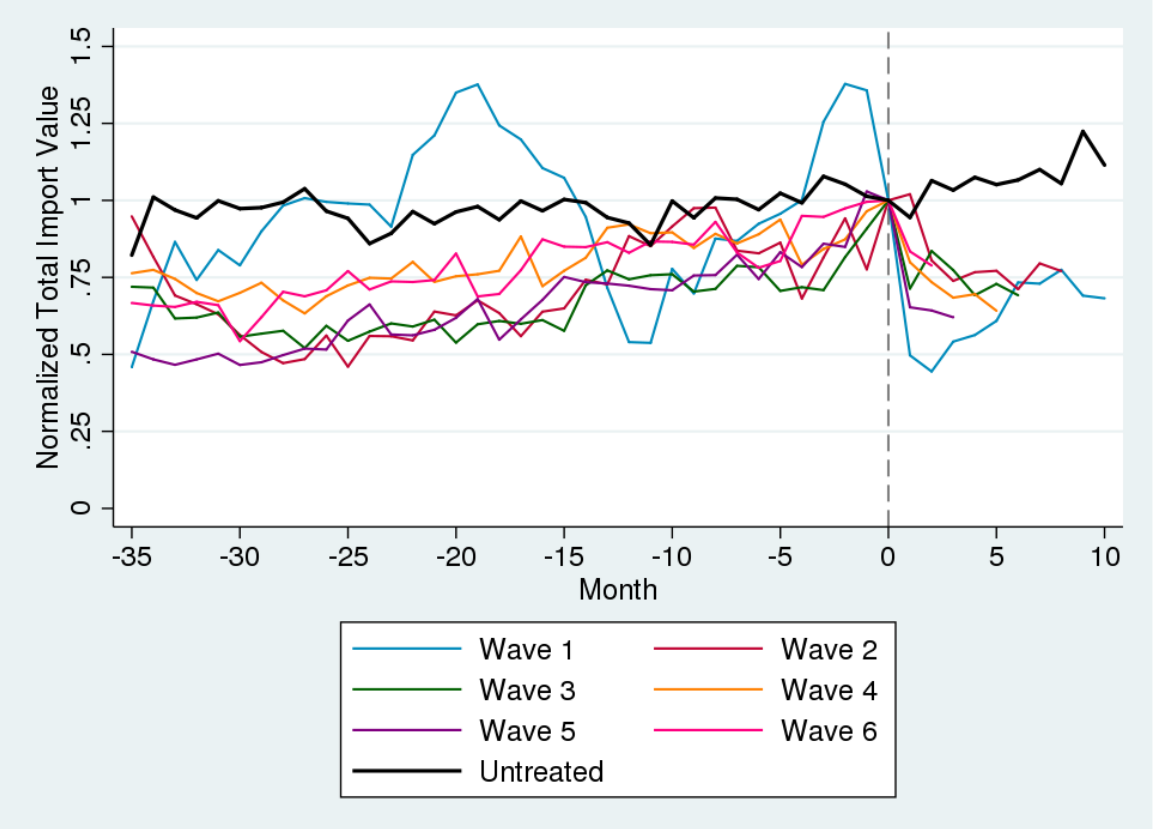


Figure 10: (from "HOW TRADE POLICY UNCERTAINTY AFFECT GLOBAL ECONOMIC ACTIVITY?")

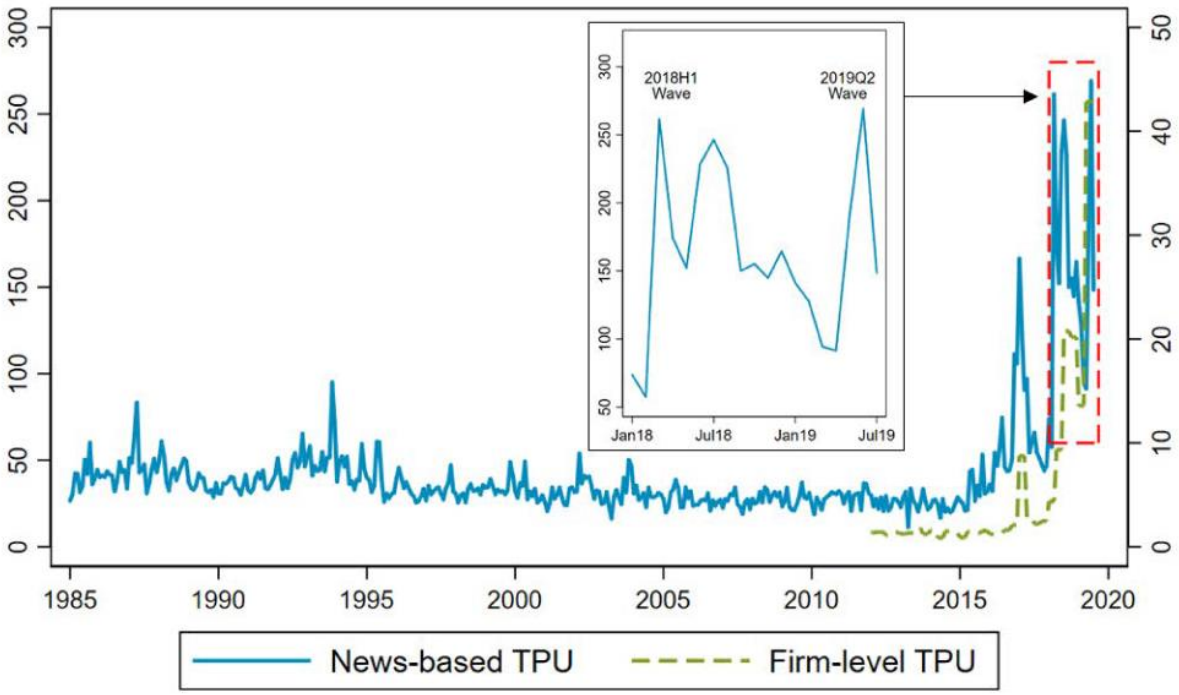


Figure 11: (from "HOW TRADE POLICY UNCERTAINTY AFFECT GLOBAL ECONOMIC ACTIVITY?")

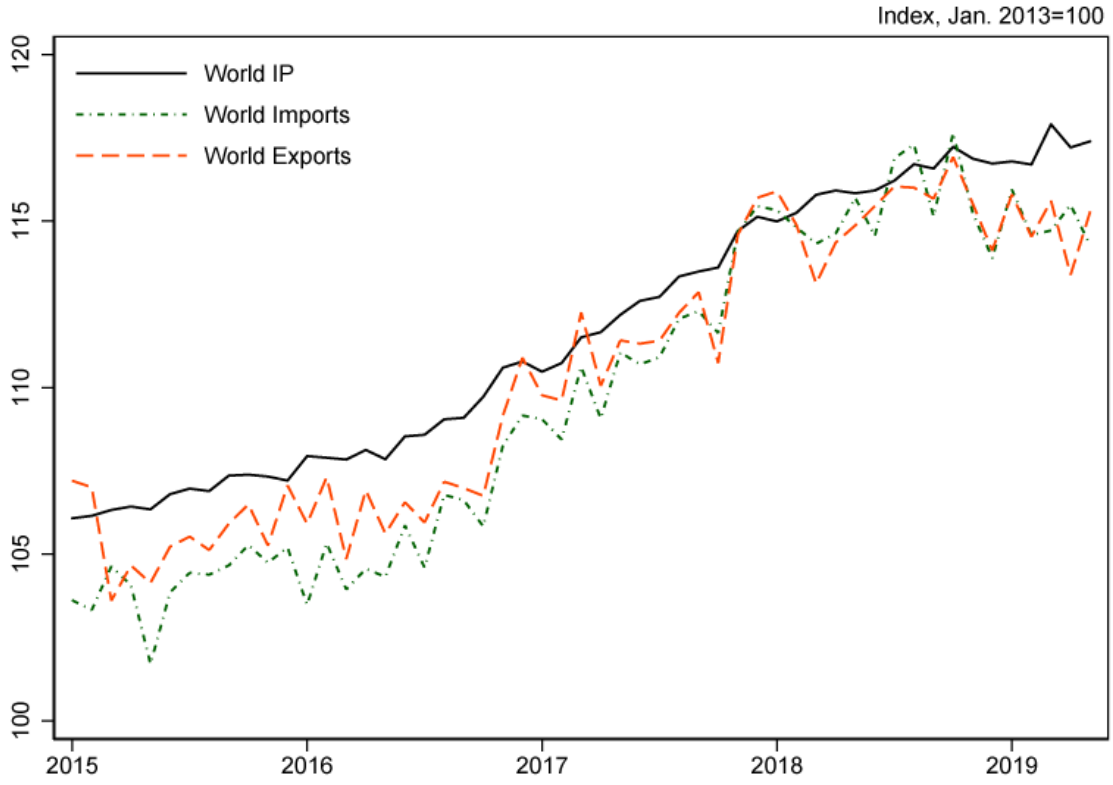


Figure 12: (from "HOW TRADE POLICY UNCERTAINTY AFFECT GLOBAL ECONOMIC ACTIVITY?")

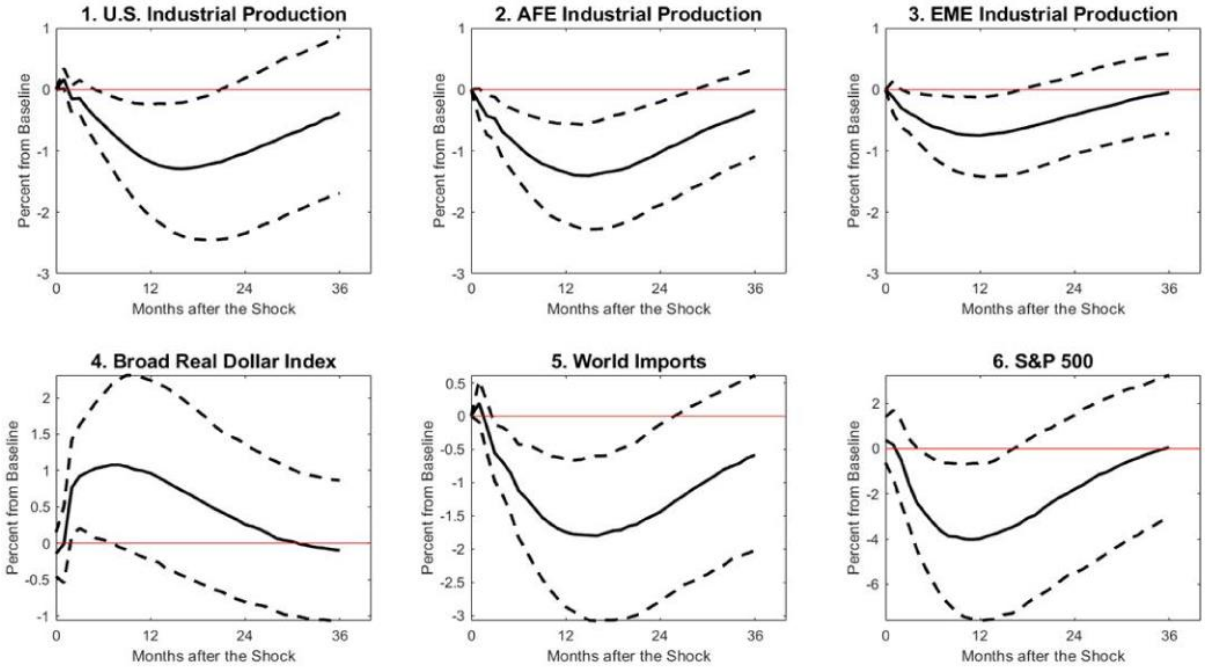
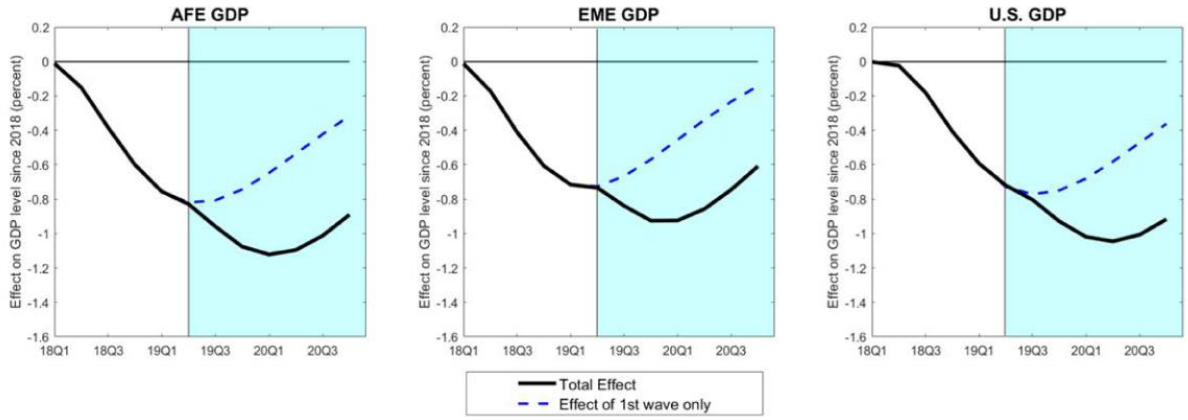


Figure 13: (from "HOW TRADE POLICY UNCERTAINTY AFFECT GLOBAL ECONOMIC ACTIVITY?")



CHAPTER FOUR

4. ALL'S WELL THAT ENDS WELL (OR NOT?)

On the fifteenth of January 2020, in the White House, Donald Trump, and the vice-premier, Liu He, signed the first preliminary trade deal. Following, the details of the deal released by the United States Trade Representative.

4.1 PHASE ONE OF THE TRADE DEAL

China agreed to increase purchases of American goods and services by at least $200 billion over the next two years. The increase in purchases will be compared to 2017 before the trade war began when China imported $130 billion in U.S. goods and $56 billion in services. These $200 billion of goods will be divided in this way (reminding that all these values should be added to the respective 2017 baseline imports):

$77.7 billion in additional manufacturing purchases over two years, which will be $32.9 billion increase in 2020 and a $44.8 billion increase in 2021. At least $52.4 billion in additional energy purchases over the two years, that will be broken into $18.5 billion additional in 2020 and $33.9 billion in 2020. $37.6 billion in services from U.S. companies over the two years, $12.8 billion level in 2020 and $25.1 billion, in 2021.

In addition to the $200 billion, China shall ensure purchases of the United States agriculture products by $32 billion over two years, $24 billion in 2020 and $19.5 billion in 2021.

In exchange, America will reduce the tariffs imposed in September 2019 on $120 billion Chinese goods by half, from 15 percent to 7 percent. The other tariffs on Chinese goods that were put in place earlier remained unchanged: "*As soon as this kicks in we're starting phase two*," Trump said. "*I will agree to take those tariffs off if we're able to do phase two, otherwise*

we don't have any cards to negotiate with."[29] Of course, all the tariffs scheduled in December have been suspended indefinitely, both from the United States and China.

The deal provides also better protection to American companies that have long complained about thefts of intellectual property and trade secrets, by including stronger Chinese legal protections such as criminal and civil procedures to combat online pirated goods.

The deal also binds China with strong restrictions on competitive currency devaluation to gain a trade advantage. China agreed to publish relevant data on exchange rates as an enforceable commitment, as for any violation they could incur United States tariffs.

"The United States and China will resolve differences over how the deal is implemented through bilateral consultations, starting at the working level and escalating to top-level officials. If these consultations do not resolve disputes, there is a process for imposing tariffs or other penalties."[30]

Additionally, the agreement would help to open the Chinese financial services market, which was limited by investment barriers, including foreign equity limitations and discriminatory regulatory requirements.

[29] https://www.bloomberg.com/news/articles/2020-01-15/u-s-china-sign-phase-one-of-trade-deal-trump-calls-remarkable

[30] https://www.reuters.com/article/us-usa-trade-china-details-factbox/whats-in-the-u-s-china-phase-1-trade-deal-idUSKBN1ZE2IF

4.2 AN ANALYSES OF THE CONSEQUENCES

To begin, the phase-one trade deal has been received in a tepid way by almost all the observers. The majority does not appear to be satisfied and some doubt that the deal will last until 2021. Following, some of the main arguments of the critics, that have been here summarized by Tim Drayson, Head of Economics at Legal & General Investment Management (LGIM): "*First, the majority of the existing tariffs remain in place, with no timetable for their removal. Second, it will be difficult for China to meet its target for purchases of US goods. Third, the deal lacks a credible enforcement mechanism. Finally, progress on the key structural issues remains extremely limited."*[31]

The fact that the trade deal is insufficient. It is underlined how the deal does not really address some of the key issues that were ultimately the reasons of the conflict, that according to Dr. Kerstin Braun, President of Stenn Group would be: "*China's preferential support of state-owned enterprises and technology transfer from American companies doing business there. Both sides need to accept the larger picture. For the US, it's that China as an economic power is not going away. For China, it's that to be in the world marketplace means complying with international business standards."*

A lot of the experts are skeptical about the capability of the Chinese government to fulfill its promises about the purchases of American goods. Not only that, many are wondering what will happen in 2022 when the deal will expire. Nick Marro, an analyst at The Economist Intelligence Unit, points out that the Chinese demand would be artificially generated because it does not follow the rules of the market. Once the two years frame would be up, the demand which will reflect the actual Chinese goods demand will fall, at the expense of the farmers that will have invested in the domestic production on the expectation of Chinese demand. He says: "*The trade war has demonstrated the problems of overexposure to a single market. But rather than encouraging export diversification, the trade deal risks exacerbating this over-reliance through its purchase targets."*

[31] https://www.theguardian.com/business/live/2020/jan/15/us-china-trade-deal-trump-tariffs-global-risks-uk-inflation-business-live?page=with:block-5e1f53fe8f0852212f74eabc#block-5e1f53fe8f0852212f74eabc

The deal lacks a credible enforcement mechanism. Some, in fact, argue that with a weakened World Trade Organization, this will bring only to more trade squabbles.

Indeed, the deal does not address the key issues, but in my opinion, if it did it would have really been "*the biggest deal ever seen*"[32]. It is unlike that these structural problems, such as the United States trade deficit or the theft of intellectual property, or the forced transfer of American technology to China will be solved by a single deal. Also, it would be harder to achieve for the United States alone, they might need the support of other nations, and institutions, they may need the help of WTO. Of course, as already underlined, it would be harder from now on even to enforce this one deal, because of the WTO being strongly weakened by Trump. This brings to another point, the perspective from where one looks at the deal. Trump's perspective about it is not America's, and the President have interests that can differ from the interests of the country. "*The trade deal, if it holds, could be a major political boost for Trump in an election year when he can argue his tough stance with China has paid off. US stock markets hit new record highs ahead of the signing."*[33] So maybe Trump would prefer to bring home what he can show to his electorate as a victory, which has already start doing, then to "bite more then he can chew*".*

It is true that some of the key issues stay unsolved, whether they are faced in an inadequate way or not even addressed. It is also true that this is a phase one deal, so maybe this is only a part of a longer-horizon plan and the issues will be settled within the other phases of this deal.

"*We're certainly glad it's not getting worse*" said Stephen Lamar, president of American Apparel & Footwear Association, and this can express my point of view: the situation previous to tariffs could be restored since both countries lost at the tariff war, and so it wouldn't be in their interest to worsen it. Relying only on the phase one deal, the situation could improve in pretty much all terms, with the acquisitions from China raising United States exportations to China and GDP, especially sectors like agriculture or manufacturing that were hit hard by the tariff war will see an improvement. It's also important to remember that almost all of the tariffs are still in place, so I'm not sure about an enhancement of the importations and of the prices of

[32] https://www.theguardian.com/business/2020/jan/15/us-china-trade-deal-donald-trump

[33] https://www.theguardian.com/business/2020/jan/15/us-china-trade-deal-donald-trump

these goods for the importers and the customers. During this year new phases could come out, and at the end of the year the situation won't be much better, but won't be worst, with Trump leaving that "work in progress" to use it during his political campaign. After that, it will be relevant to see who the new administration will be and whether go on with Trump's policy, would be in its priorities. Anyway, China could maybe give up on something, but I don't think the economic balance will be changed in favor of the United States, because I'm not sure that the United States has the upper hand anymore.

For example, yes this deal might be a progress in the field of the IP theft, but it's a big step from here to say that this will totally solve the problem, and at this point, I can't imagine a deal that could manage to do it, as I'm not sure that a solution could exist no more.

4.3 CONCLUSION

The phase one deal has been signed. New purchasing from China, the cut of some United States tariffs, legal protections concerning intellectual property, an agreement on currency, and one on the Chinese financial market are included in the deal.

The reception was tepid, and some accused the deal to be insufficient, China not to comply with the deal, and anyway, it was underlined how there was no efficient mechanism of enforcement.

Albeit all the critics to this phase one deal, it has to be said that this deal still improved a situation of uncertainty. This is testified by the lifting of stocks the exact same night that the deal was signed. Being that there has been a substantial risk for the trade war to start a global recession, these fears seems, if not overcome, at least cooled down.

Anyway this is just a partial result, and it should be cautious to wait new developments before claiming that this trade war is over. It is important to see how the situation will develop in the mid-term, if the two parties will be able to stick to the agreement and what will be the following phases of the deal.

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