THE EFFECT OF THE TRUMP TARIFFS ON MAJOR US TRADE PARTNERS

An Undergraduate Research Scholars Thesis

by

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ABSTRACT

The Effect of the Trump Tariffs on Major US Trade Partners

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Literature Review

This research builds on current research and literature documenting and analyzing the impact that the tariffs and "trade war" has had on the volume and value of imports and exports between the US and its trade partners. The recent trade war has been a subject of scrutiny by researchers and federal governments since it was started. Research and studies have been conducted by the Congressional Research Service (Williams) to understand and inform the public on the effects that the tariffs will have. Robert Scott, in his report on the aluminum sector, actually showed positive gains to employment in the aluminum sector, and investments in domestic aluminum products, which was the intended effect of the tariffs. While other researchers such as the paper by Fajgelbaum focus on the large decrease in both imports and exports by the US due to the pressure on foreign trade. The Congressional Budget Office gives a general overview of the economic outlook including the effects of the trade war and project positive GDP growth in the long run, despite short-run negative GDP growth due to the regulation of international trade.

Thesis Statement

The United States, Mexico and China are some of the largest trade partners in the world, and tariffs on both imports and exports of steel and aluminum between the countries will have a noticeable and measurable economic impact on all countries involved.

Theoretical Framework

With the United States International Trade Commission website, I will be able to get monthly import and export data by country and by commodity. I will cross-reference this data with the announced tariff dates to begin to detail the impacts those tariffs had on the trade economy.

Project Description

The research question I am pursuing is how the aggressive trade tariffs that the United States has put in place has affected trade partners such as China and Mexico. I am specifically addressing the tariffs on steel and aluminum, and the tariffs that other countries have placed on the US in turn. My research goals are to further understand and document the impact that the Trump Administration's tariffs and "trade war" has had on countries such as China and Mexico. During the Trump Administration, the United States began to place tariffs on countries such as Mexico and China for varying reasons. These countries retaliated with more trade tariffs and a trade war began to develop

My research goals are to further understand and document the impact that the Trump Administration's tariffs and "trade war" has had on countries such as China and Mexico. During the Trump Administration, the United States began to place tariffs on countries such as Mexico and China for varying reasons. These countries retaliated with more trade tariffs and a trade war began to develop. The United States and China are two of the largest trade partners in the world,

and tariffs on both imports and exports between the countries will have a noticeable and measurable economic impact. This research will specifically address some of the largest tariffs put in place between the largest trade partners. Such research will come alongside existing research to better understand the impacts such tariffs from a trade giant can have on the world. Alongside having political and relational impacts on the world trading floor, the "trade war" that the United States has entered into with many countries has noticeably changed the economic theatre of both imports and exports for those countries.

DEDICATION

This paper is dedicated to all those who assisted me during my final year of Texas A&M and with this project. I dedicate this paper to my father Wayne L. Smith Jr. in the hopes that he will finish his dissertation as well and achieve his doctorate.

ACKNOWLEDGMENTS

I would like to thank Dr. Craig T. Schulman for his help and guidance throughout this project; the University Research Scholars thesis program for the opportunity to conduct this research and for their help in the formatting and refinement of this project; and the Department of Economics for the permission to conduct this research. I also thank Dr. Wayne L. Smith Jr. and Mrs. Alexandra J. Smith for the continued support of this project.

KEY WORDS

NAFTA	North American Free Trade Agreement
WTO	World Trade Association
EU	European Union
GDP	Gross Domestic Product (Measured in US Dollars)
NAISC	North American Industry Classification System
ITC	International Trade Commission
USTR	United States Trade Representative

INTRODUCTION

The research question I am pursuing is how the aggressive trade tariffs that the United States has put in place has affected trade partners such as China and Mexico. I am specifically addressing the tariffs on steel and aluminum, and the tariffs that other countries have placed on the US in turn.

The two largest economies in the world are the United States and China. An economic standoff where the US and China are competing to remain sovereign in a trade war will have lasting effects during and after the "trade war" has concluded. The beginning of the Trump presidency was focused on American prosperity, and one aspect of this was to sign a memorandum to target China's economic aggression. This led to the "U.S. trade representative to level tariffs on about $50 billion worth of Chinese imports, following a seven-month investigation into China's intellectual property theft" (Hu 63). The velocity at which the "trade war" took stage is also an interesting facet of the economic event. Trump, after the Mar-a-Lago summit, actually had a good visit to China at the end of 2017, but soon after, the US released a new security strategy where they "openly named China and Russia as strategic rivals", and reversed decades of established trade rivals and allies (Hu 65). The outcome of this "trade war" is still unknown, but a large consensus is it will "unsurprisingly, leave both the Chinese and the American people less prosperous than they would otherwise have been" (Tan 216). In an economic view this makes sense, and while President Trump's fight to reduce the American trade deficit is well-natured, some economic hardship will be forced to come from it. China is well-known for maintaining a trade surplus, but with American tariffs may begin to place pressure on their economic model. The impact has already begun in China and just over the "five

months between March 2018 and August 2018, the Shanghai Composite Index — a barometer of the Chinese stock market — has plummeted by approximately 18% and the RMB has depreciated nearly 8%" (Zhang 64). Another immediate impact important to the world economy is how such tariffs impact the most efficient firms.

Solar panels were also affected by the trade tariffs and a 30% tariff was put in place in 2018. Oddly, the tariff did not protect the solar panel company First Solar, and their stock fell when the tariff was announced. This shows a possibly overlooked negative of the "trade war" where "it appears that the tariffs applied by the United States will enable less-efficient firms like Suniva and SolarWorld to survive, while not benefiting the most-efficient exporting firms" (Feenstra 31). There are some ideas and methods of curbing the effects of the trade war, and even strategies to end it. One roadblock to this is the general setup of the "imbalance in the relationship is that Chinese state enterprises are buying their competitors in the United States and Europe, especially in high-tech sectors. U.S. firms are not allowed to make similar purchases in China because of China's restrictions" (Dollar 133).

CHAPTER I

BACKROUND AND FRAMEWORK

1.1 United States New Trade Policies

This paper seeks to provide estimates of the effect of the Trump tariffs on the United States, Mexico, China, and other main US trading partners. To understand the research being conducted in this thesis and others, one must first know the full definition of a tariff and what it entails and means for all countries involved. A tariff is "a tax on imports or exports between sovereign states". It is a government regulation of foreign trade and involves a policy that taxes imports of foreign goods in an effort to encourage domestic industry. The US has had a history of tariffs far into its past, but in the past decades the tariff rates have decreased on average. Figure 1 illustrates the decline in American tariff rates and showcases noteworthy times tariff rates were increased dramatically.

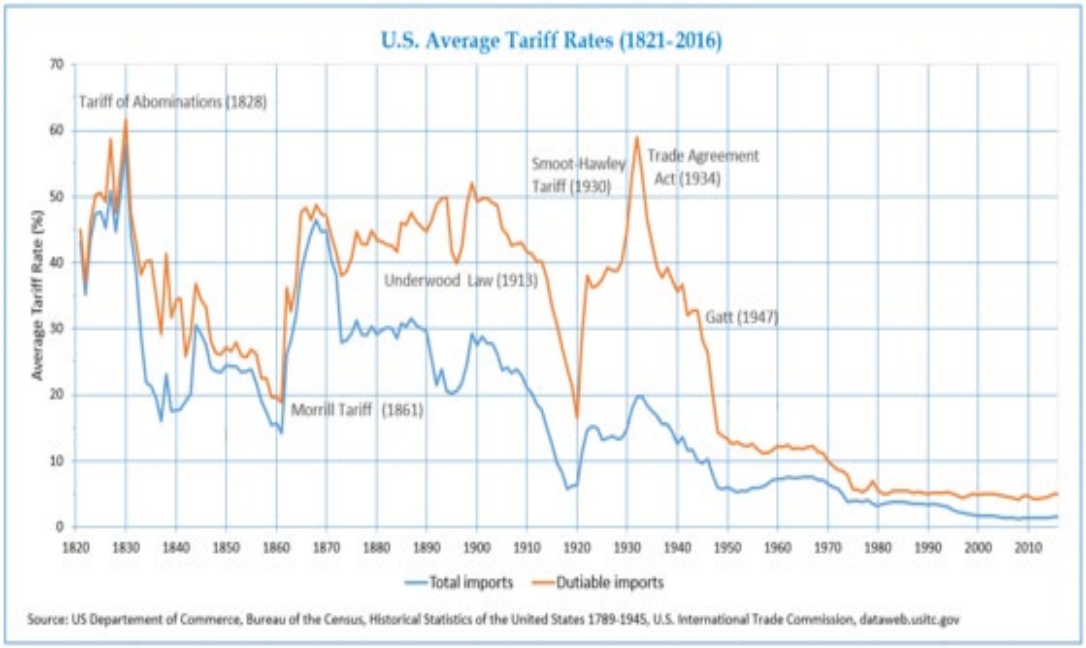

Figure 1. Graph of US Average Tariff Rates from 1821-2016.

Donald John Trump was sworn into office on January 17th, 2017. During his presidential candidacy run Trump made it known that he believed that other countries were taking advantage of the US. He based his assumptions on the state of the US trade balance, which was overwhelmingly in a deficit with a deficit nearing $600 billion to foreign countries. He also expressed his dislike of the then-current North American Free Trade Agreement, and the Trans-Pacific Partnership. Trump was quoted as saying: "I have long contended that NAFTA was perhaps the worst trade deal ever made". NAFTA was signed into effect on January 1st, 1994 by the United States, Canada, and Mexico. This created a trade bloc in North American and has been the comprehensive trade agreement between the United States' closest, and some of its top, trade partners. Trump ran much of his campaign on giving back to the American people and reducing the trade deficit the USA held with almost all of its major trade partners. Trump emphasized China as the most offender, but the main tariffs he would implement would affect China, Mexico, and Canada, America's largest trade partners.

1.2 Timeline and Retaliatory Tariffs

The "Trump Tariffs" of 2018 did not start in 2018 and did not end until February 14, 2020. The tariffs were composed of three separate actions, which each enacted a tariff in a specific market at a specific time. The first round of these tariffs was enacted in February 2018 and was against large residential washing machines and solar panels. Trump used a very rare section of the Trade Act of 1974 to determine these tariffs. Section 201 of the Trade Act "allows the President to impose temporary duties and other trade measures if the U.S. International Trade Commission (ITC) determines a surge in imports is a substantial cause or threat of serious injury to a U.S. industry" (Williams 2).

The tariffs would initially start at 30% and would fall to 15% over 4 years. In another sector of the US tariffs, the solar sector was put under tariffs as well and "thus, appears that the tariffs applied by the United States will enable less-efficient firms like Suniva and SolarWorld to survive, while not benefiting the most-efficient, exporting firms" (Feenstra 31).

The second round of tariffs targeted steel and aluminum imports and was enacted by President Trump on March 8, 2018. For these tariffs Trump used Section 232 of the Trade Expansion Act of 1962 which "Allows the President to adjust imports if the Department of Commerce finds certain products are imported in such quantities or under such circumstances as to threaten to impair U.S. national security" (Williams 2). The tariff was 25% on steel and 10% on aluminum. The Trump administration actually exempted a number of countries including Canada, Mexico, Argentina, Brazil, South Korea, and the EU. However, these exemptions were removed and went into full effect in June of 2018.

The tariffs enacted by the United States did not go unnoticed as many of the affected countries enacted retaliatory tariffs, beginning the trade war. China enacted tariffs in response to the second round of tariffs in April of 2018. The EU, Canada, and Mexico followed suit with retaliatory tariffs in June and July of 2018. At the same time, both the EU and China initiated official complaints to the WTO (World Trade Organization) in response to the steep steel and aluminum tariffs. China's retaliatory tariffs focused on aluminum, pork, and agricultural products. The EU, Canada, and Mexico focused their tariffs on steel, aluminum and agricultural products.

The third round of tariffs enacted by the United States focused solely on imports from China. These tariffs were based on Section 301 of the Trade Act of 1974. This section "allows

the United States Trade Representative (USTR) to suspend trade agreement concessions or impose import restrictions if it determines a U.S. trading partner is violating trade agreement commitments or engaging in discriminatory or unreasonable practices that burden or restrict U.S. commerce" (Williams 2).

In 2017, the U. S. Trade Representative began an investigation of China which led to a report in March 2018 that concluded that China was engaging in unfair trade practices and the "memorandum directed the U.S. trade representative to level tariffs on about $50 billion worth of Chinese imports, following a seven-month investigation into China's intellectual property theft" (Hu 63). The US enacted tariffs on over $60 billion of Chinese imports in total. These Chinese tariffs made up a majority of the tariff revenues collected by the Trump tariffs. These direct tariffs were designed to affect firms that had readily available substitutes for their Chinese imports, but "firms were unable, at least in the short-term, to reorient sourcing strategies, perhaps because buyer-seller relationships embody relationship specific investments and capital cannot easily be replaced by alternative foreign and domestic sourcing" (Handley 5).

Each of the three phases of US tariffs were followed by foreign retaliation in the form of similar or equal tariffs on US goods. For Phase 1 and 2, Chinese tariffs matched the tariffs placed on their goods with equal dollar amounts. For Phase 3, only $60 billion of US goods were taxed at a rate ranging from 5-10%.

In May 2019, the US announced that it would be increasing its Phase 3 Chinese tariffs to 25% on May 10th. China quickly responded by announcing it was raising its retaliatory tariffs on the US as well. The US also hinted at rolling out a Phase 4 and 5 of tariffs if China continued to respond with their own tariffs, to which China also announced it would retaliate with its own Phase 4 and 5 on US goods. As Dollar states, "the retaliation would not have much direct effect

on the U.S. economy, since the United States exports so little to China, but it would create an uncertain environment for trade and investment globally that would slow U.S. growth" (Dollar 5). Trade wars may be "easy to win", as Donald Trump quotes, but are often very disruptive to the economic world as a whole.

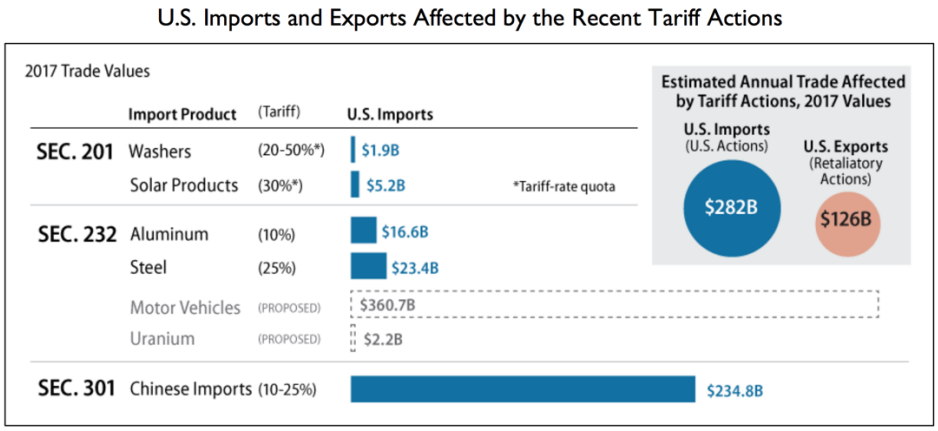

Figure 2. US Imports and Exports Affected by the Recent Tariff Actions

Figure 2 details the impact of the 3 phases of tariffs that went into place. It also shows the annual trade affected by the retaliatory tariffs placed on US exports. Most studies, however, "predict declines in GDP growth: the Congressional Budget Office estimated that the tariffs currently in effect would lower U.S. GDP by 0.5% in 2020, below a baseline without the tariffs, while raising consumer prices by 0.5%, thereby reducing average real household income by $1,277" (Williams 3).

CHAPTER II

METHODOLOGY

This paper analyzes the effect of the 2018 Trump Administration Tariffs on the US economy by way of GDP and the changes in the aluminum and steel industries, and generally the impact on the US' trade partners during the time. I am using a method to test for a significant break in the growth path of the US GDP. For this I will be using a simple growth model for the GDP known as a "random walk with drift".

$$\ln(GDP_t) = \ln(GDP_{t-1}) + \beta_1 + \varepsilon_t$$

Where in the equation, the Beta_1 parameter is the period to period (quarterly) growth rate. If we rearrange the equation and rename variables:

$$y_t = \ln(GDP_t) - \ln(GDP_{t-1})$$

$$y_t = \beta_1 + \gamma D_t + \varepsilon_t$$

Where the D variable in the final equation is a "dummy" variable that can be equal to 1 or 0 and is equal to 1 starting in the period in which the tariffs went into effect. If the tariffs had a negative impact on the US GDP growth rate, then the gamma parameter will be negative and statistically significant. Most of the data collected for the main analysis comes from official federal reports including the Congressional Budget Office, and the Board of Governors of the Federal Reserve.

For the impact on the steel and aluminum industries, the report will focus more on qualitative effects and more generally observable impacts such as employment rate in those sectors, percentage of usage, and overall export numbers and prices. Information for this aspect of the research comes from a variety of sources including the Bureau of Labor Statistics, policy

briefs from the International Trade Commission, the CRU: Aluminum Market Outlook, and import/export data for steel and aluminum from the Customs Department (PRC).

CHAPTER III

EMPIRICAL RESULTS

3.1 Steel Industry Effects

While many domestic steel firms may experience positive effects from the steel tariff, overall the rising prices and tax enacted upon domestic firms can lead to negative outcomes. An added tax to steel imports can cause domestic prices to increase, forcing some domestic companies to shut down factories, or lay off its workers, to maintain a favorable profit margin. The US currently imports close to 30% of its steel and relies on domestic firms to supply the other 70%.

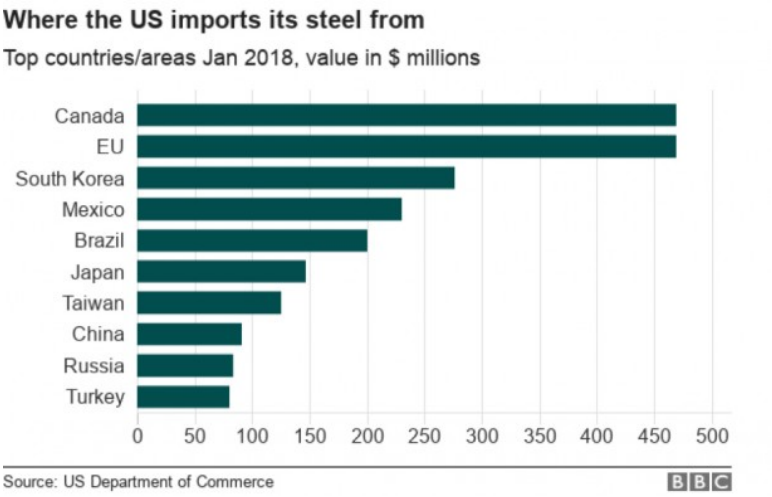

Figure 3. US steel imports by country

Figure 3 showcases that the US' import of steel mainly comes from its main trading partners that are affected by the tariffs including Canada and the EU among others. Due to the "international retaliation and domestic downstream price increases is estimated to lead to a 0.2% short-term annual decline in GDP and job-loss mainly in low-skill areas" (Oberoi 2). Near the end of Q1 in 2018, the price of domestic steel began to rise, approaching upwards of a 20%

increase in only 3 months. By the end of the year in 2018, steel prices had risen 41% to $1,029 per ton. For the average American family, this amounts to "$20 for the steel and aluminum tariffs" that they will have to pay (Bui 2).

Internationally, Chinese steel imports have continued to decrease. In only the first 8 months of 2018, Chinese steel imports fell 13.3% to 47.2 million metric tons. On the domestic side, US production of steel has increased while the import of foreign steel has slowed.

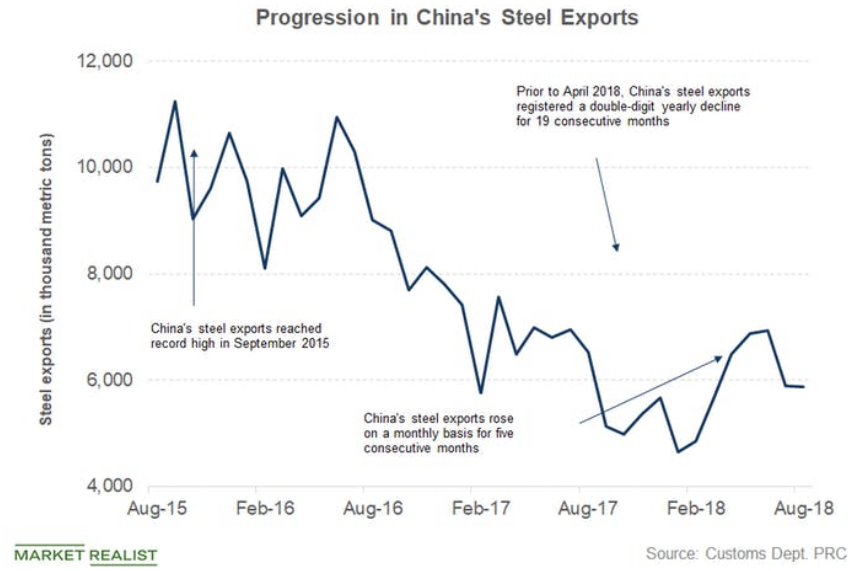

Figure 4. Progression in China's Steel Exports

Figure 4 showcases the lower exports of steel for China over time, culminating in multiple consecutive periods of declining exports. Due to the large tariffs over multiple sectors, "imports of varieties targeted by U.S. tariffs fell on average 31.7%; imports of targeted products fell 2.5%; and imports in targeted sectors fell 0.2%" (Fajgelbaum 1).

3.2 Aluminum Industry Effects

As with the effects in the steel industry, the aluminum industry felt the domestic and international force of the high tariffs. While the tariffs themselves affected local firms, the retaliation tariffs of trading partners also had an effect on the aluminum industry. The trading partners (including Canada and Mexico) that announced they would be enacting retaliatory tariffs make up 70% of the US' steel and aluminum imports, and 68% of the total US export goods. These retaliatory tariffs will compound with the rising prices due to the import tax and continue to produce negative impacts. Employment, however, will rise in the aluminum and steel industry but "the tariffs, quotas and retaliation would increase the annual level of U.S. steel employment and non-ferrous metals (primarily aluminum) employment by 26,280 jobs over the first one-three years, but reduce net employment by 432,747 jobs throughout the rest of the economy, for a total net loss of 400,445 jobs" (Francois 2). However, the actual output of "U.S. production of primary and downstream aluminum products (NAICS 3313) increased 9.8 percent between February and October 2018 (before and after the tariffs took effect)" (Scott 6).

Estimated Impact of Steel Tariffs, Quotas and Retaliation on the U.S. Economy

Change in GDP (billions of dollars)	-$36.8
Change in GDP (percent)	-0.2%
Change in steel imports (percent)	-44.4%
Change in all aluminum imports (percent)	-12.7%
Change in all imports (percent)	-1.9%
Change in all exports (percent)	-1.0%

Source: Authors' estimates.

Figure 5. Estimated Impact of Steel Tariffs, Quotas, and Retaliation on the U.S. Economy

As referenced in Dr. Francois' Policy Brief, the impact to the aluminum sector is a hefty one. Aluminum imports suffer almost -13% drop in imports according to Figure 5 above. This is because "the tariffs make it cost prohibitive to import steel and, as a result, there is an associated

cost burden for US industrial sectors that are dependent on steel as a raw material, weakening the competitiveness of American manufacturers and potentially leading to job losses" (Halsey 1). Indeed, the aluminum and steel production industry suffered some job losses in the low-skill areas alongside the increase due to a closer focus on domestic firms.

3.3 United States GDP Effects

As seen in the growth rate model and confirmed by federal officials, the GDP growth rate of the US was slowed during the period of the enacted tariffs. The annual decrease in GDP was -0.2% as the domestic firms began to rely less on foreign goods and begin to produce domestically as best as they could. Economic outlooks from the Congressional Budget Office estimate that while the GDP was decreased in the short run due to the restriction of international trade, the long-term GDP would recover and actually make strides in decreasing the trade deficit and decreasing the reliance on foreign goods. As of January 23, 2020, "the United States collected $54 billion from the additional taxes paid by U.S. importers, according to U.S. Customs and Border Protection" (Williams 3). The actual total effects are somewhat smaller "because approximately 10.5% of U.S. annual trade (12% of imports and 8% of exports) is affected by the tariff actions to date and trade represents a moderate share of total U.S. economic activity (27% of U.S. GDP in 2017)" (Williams 27).

3.4 Legal Ramifications

Donald Trump's extensive tariffs did not pass quietly into regulation, however, as many trading partners took to the WTO to file complaints. The 3 sections of the Trade Act were brought in defense of the US' new trade tariffs. While the Administration argues that the "imposition of U.S. import restrictions is within its rights under international trade agreement obligations, including at the World Trade Organization (WTO), U.S. trading partners disagree

and have initiated dispute proceedings, and begun retaliating" (Williams 5). Nearly a year after placing tariffs on the EU, among other countries, "the United States won a nearly 15-year-long World Trade Organization (WTO) dispute against the European Union. The WTO ruling authorizes the United States to impose tariffs of up to 100 percent on $7.5 billion worth of EU goods" (York 4).

CONCLUSION

This paper examines the effects of the tariffs imposed by the United States and major trading partners in 2018 on the value of those traded goods and overall impact on each countries' general economy. There is an estimated total deadweight loss of $6.9 billion during just the first 11 months of 2018, and an added $12.3 billion cost to domestic consumers and importers as tariff revenue collected by the United States. Both the imports and exports of aluminum and steel decreased during the time of the tariffs, but not without effects to the employment market in those sectors. Sectors under tariff generated some domestic jobs, but due to the rising domestic taxes due to the tariffs, overall unemployment rose. While the Trump tariffs did increase government revenue through the taxes, the main focus of the trade policy enacted was not to make profit, it was to rebalance the trade deficit and reliance on foreign goods. With the releasing of the tariffs largely in February 2020, trade balance has begun to drift back into a manageable balance.

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